DOCUMENT RESUME

ED 339 237 FL 019 977

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TITLE Making the Most of IT Skills. Technology in Language Learning Series.
INSTITUTION Centre for Information on Language Teaching and Research, London (England).
REPORT NO ISBN-0-948003-23-5
PUB DATE 89
NOTE 67p.; For related documents, see FL 019 976-981.
AVAILABLE FROM Centre for Information on Language Teaching and Research, Regent's College, Inner Circle, London NW1 4NS, England (6.95 British pounds).
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Reference Materials - Vocabularies/Classifications/Dictionaries (134)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Databases; *Educational Technology; Elementary Secondary Education; Foreign Countries; Glossaries; Information Systems; *Information Technology; Language Teachers; Online Systems; *Second Language Instruction; *Word Processing; Writing Instruction
IDENTIFIERS France

ABSTRACT

The role of word and data processing as tools is discussed for students, writers, information handlers, and teachers to use in setting up activities with specific language learning objectives. The book is intended to help teachers enhance and extend everyday classroom activities through essential information technology skills. Chapters cover the following topics: (1) information and communication (e.g., general information, word processing, databases); (2) word processors as a tool for teachers (e.g., gap-fill activities, authoring packages, sequencing activities, search and replace techniques); (3) the student as writer (e.g., success and failure, practical considerations, dialogue completions, collaborative writing, electronic mail); (4) pupils as information handlers (e.g., different types of databases, linguistic functions and data processing skills, database management systems, disk-based dedicated databases, keyword searches online, use of abstracts); (5) databases as practical tools for busy teachers (e.g., teacher generated materials, setting up a resources database, student records, activities based on printouts, predicting and hypothesizing); and (6) practical considerations (e.g., curriculum change and instructional technology--IT, introducing IT into a language department, hardware, software, disk and file management, networks). A glossary is included along with chapter notes. (LB)

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Technology in Language Learning

Making the Most of IT Skills

by Sue Hewer

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TECHNOLOGY IN LANGUAGE LEARNING

(*Series editor* Brian Hill)

Making the most of IT skills

Sue Hewer

For Mark

First published 1989
© 1989 Centre for Information on Language Teaching and Research
ISBN 0 948003 23 5

Cover design by Pieter Sluis
Printed in Great Britain by C.M.D. Limited

Published by Centre for Information on Language Teaching and Research, Regent's College, Inner Circle, London NW1 4NS

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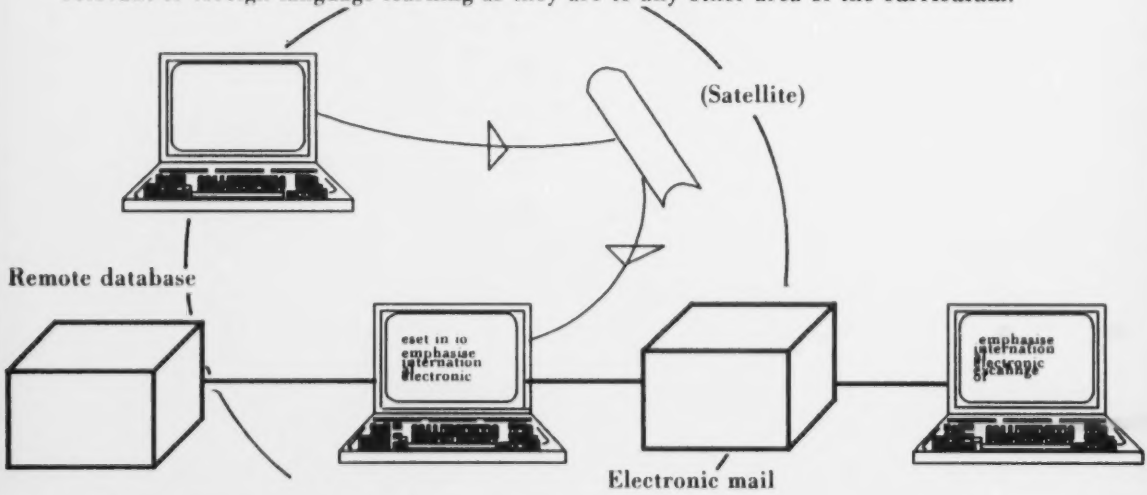
CHAPTER 1

Information and communication

Communicating the information

For the teacher and learner of foreign languages, communication means the successful transfer of information from one person or group of people to another. Communication and information are inextricably linked. 'Message' and 'medium' are mutually dependent.

In recent years the range of media available by which to express, exchange and store information has grown with the spread of microchip technology into all areas of our lives - schools, offices, shops, manufacturing plants, libraries and our homes. Computers, once solely regarded as number crunchers, are now at the heart of a communications revolution and the skills necessary to be part of that revolution are as relevant to foreign language learning as they are to any other area of the curriculum.



IT to motivate and absorb

The key areas of information technology (IT) for those involved with words rather than numbers are wordprocessing and dataprocessing. They are of intrinsic value and, within the wider educational context, involve young people in the development of transferable and marketable process skills which will be welcomed by future employers.

Equally, they provide excellent vehicles for task-based learning in which students become actively and often creatively engaged and which they perceive as worthwhile and absorbing, and as such, motivating. The tasks can be comparatively open-ended, focusing on the student as writer, information gatherer, provider or seeker. On the other hand activities can be set up by the teacher with specific language learning

objectives in view, including the development of linguistic sub-skills and the acquisition of structural concepts and vocabulary, all essential for the attainment of communicative competence.

The purpose of this book

It is the purpose of this book to examine the role of word and data processing both as tools for students as writers and information handlers and as tools for the teacher to use in setting up activities with specific language learning objectives. Examples relating to general concepts will be given in English. Examples of particular applications will be given in the language in which they were used in the classroom.

Technical terms are indicated by an asterisk and are explained in the glossary. Numbers following words relate to the Chapter Notes which follow Chapter 6.

Hardware and software

The merits of individual software packages and types of computer will not be discussed here since the range is great and ever-changing.

The book is intended to help teachers, and those who support and train teachers, to incorporate into everyday classroom activities the essential information technology skills which can enhance and extend what is already done.

This introductory chapter is intended to give an insight into the nature of word and data processing in the context of the teaching and learning of foreign languages.

A word of warning

Learning to use a computer is a little like learning to swim. You can only learn about it from a book. You cannot learn how to do it. To learn how to use a computer means sitting down with the machine when you have the time to explore and experiment. If some of the ideas that you read about in this book do not quite make sense, you might find it helpful to try them out on a computer. In order to do this, you will first need to come to grips with a simple word processing and data processing package within which to explore IT applications in language learning and teaching.

WORDPROCESSING

Characteristics of wordprocessing

In order to examine closely how wordprocessing can serve both the teacher and learner of a foreign language by enhancing and extending what already takes place, it is important to be aware of the characteristics of wordprocessing which make it more than an alternative to pen and paper.

Wordprocessing packages vary greatly in the range of facilities offered according to the market for which they were designed. A number of simple packages exist for the primary age group whereby children of seven and under begin to develop expertise in the skills of drafting, evaluating and revising. For the adult writers packages exist with header*, footnote* and indexing* facilities, and spelling, grammar and style checkers*. All anticipate the use of a printer which is an essential peripheral* in education since

pride in the production of a good clean copy is a great motivator, and a worthwhile end-product vital.

The provisional nature of wordprocessed text

The essential characteristic of all wordprocessors, however simple or complex, is the provisional nature of the text generated. It is this which differentiates word-processed text from traditionally written or spoken forms. There need never be a final version. Even when it has been printed, it is likely that it will have been saved* on disc* and, therefore, capable of being changed at any time.

Errors are stepping stones to success

The potential for making changes has considerable implications for foreign language learners, some of whom, in the past, have found that the development of writing skills in the target language has been a less than successful and happy experience. Text produced using a pen and paper becomes a fixed object which can be criticised but which can only be corrected, often piecemeal, by rubbing out, crossing out or re-writing. The activity is orientated towards failure from the outset since, in the students' eyes, errors, detected by the teacher, denote failure.

When using a wordprocessor, errors become stepping stones to success. Printouts* submitted to the teacher for comment do not represent final, unalterable objects on which judgement can be passed. Rather they are a means of getting feedback which will lead to success since the text remains on the disc, ready to be altered according to the nature of the comments received.

It is for the student, or the student in consultation with the teacher, to decide on what will be declared the 'final version' and the student knows that that final version is likely to attract approval. In short the student has an expectation of success.

Processes are as important as the product

As we have seen, in traditional writing activities, it is usual for the teacher to receive the product. It is unusual for the teacher to play a part in the processes associated with the development of the product. Wordprocessing as a classroom activity is very public. A screen is more readily seen from a distance than a piece of paper. It is possible, therefore, for the teacher to observe errors as they are made. In this way the teacher gains an insight into the nature and cause of the error, something not always apparent when reading the finished product. Understanding the cause of error is more helpful to a teacher than simply reading its effects.

Bridging the gap between conceptual and linguistic capabilities

From the students' point of view, one of the difficulties of writing in the target language has been the mismatch between their conceptual and linguistic competence. Wordprocessing cannot of itself obviate that mismatch. However, since anything typed in can be easily changed, students are encouraged to get down their ideas, however imperfectly expressed, and then to refine the expression making use of all the means at their disposal which, where possible, should include not only a dictionary and grammar reference if appropriate, but also the teacher.

What are they?

Databases are collections of data which become information when interpreted and given meaning by the human user. The collection can be provided by an external supplier such as PRESTEL (1). Alternatively, an individual or group of individuals such as a school class can make up their own 'do-it-yourself' database with the aid of database management software which provides them with the means to create a structure for their information, to type in data, to retrieve information and to display it.

Databases search for and display information requested by the user. They can also, in some cases, sort* the data in an order determined by the user. As the searching and sorting is done electronically and very rapidly, the user is relieved of the physical constraints imposed by having to work through a large number of cards, as in a card index, and free to concentrate on the information itself, the nature and formulation of searches and the interpretation of the results.

Making up a database

Authentic data on a chosen topic, obtained from exchange schools or through class links is an ideal starting point for making up a database. Students have a reason for gathering the data and for asking questions rather than responding. They create their own database which can then act as a starting point for activities involving all four language skill areas, not least the kind of subskills needed for successful reading in the target language. Topic-related databases provide an excellent vehicle for contextualised vocabulary acquisition and revision.

Information stored in databases of the kind likely to be found in regular use in schools has similar qualities to text generated using a wordprocessor, in that text can generally be readily edited and added to. Students are again freed from the fear of making an irreversible error and, whilst understanding that accuracy is important for reliable searching of the database, they can pursue that ideal of accuracy with the assurance that they are likely to succeed.

Dynamic data

As we saw at the beginning of this chapter, the commodity in which those engaged in communication deal, is information. For children information in the language classroom can appear very static, fixed to paper or magnetic tape. It has no secrets to reveal. It is there or it is not there. When it is there, its form never changes.

Information retrieved from a database is not quite the same. Answers to complex questions can be found rapidly, although the questions themselves had not been formulated when the data was typed in.

Perhaps even more importantly, information gathered by children and the database(s) created by them for future use by themselves and others, gives them a feeling of ownership difficult to emulate in other ways sometimes in the foreign language classroom.

Group and pair work

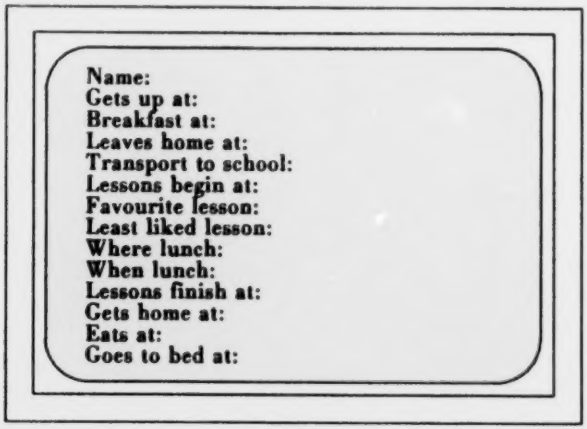
Databases give students authentic reasons for information gathering before coming to the keyboard. They provide a range of activities at the keyboard. They offer printouts of information necessary for the completion of tasks away from the keyboard. They are a very useful element in a circus of group activities. A database project can equally involve a sequence of activities incorporating all four language skills.

Seeking information

Imagine, for example, that, in a class exchange, students in a German school have worked out a questionnaire for completion by their English colleagues, as individuals, based on information that they have decided that they wish to have. The questionnaire concerns their school day. The English students are required to fill in what time they get up, have breakfast and leave for school, how they travel to school, when school begins, which are their most and least liked subjects, where they have their lunch, what time they finish school, get home, eat their evening meal and go to bed.

Structuring information

Whilst awaiting the replies, the German students use the questions that they have devised to work in pairs to elicit the information from each other. The record* structure is worked out to reflect the focus of the questions and field names* are decided on. The information resulting from the pair work is then entered into the database by groups of three students, one reading the information, another typing it in and a third checking the input*. This information will provide the basis for later work involving a comparison between the German and English students' days. Printouts are made and individuals are asked to check their entries and make any changes that they feel necessary.



Screen displaying a record with field names

On receipt of the completed questionnaires from England, the data is entered into the database as before. The class then decides on a number of questions that they want

answered by searching the database. Small groups are allocated one or more questions to which they proceed to seek the answer(s), reporting back their findings to the rest of the class. They might be asked to find out how the majority of the English children get to school, which is the subject that is the least popular, who stays at school for lunch, at what time most people go to bed.

The potential of this type of activity for establishing firm links between question words and the kind of information that they elicit is considerable, not least because it involves the students in a dynamic process for which their strategies must be correct if they are to succeed.

Search strategies will not always be set up correctly and errors will be made. However, as with wordprocessing, the first attempt need never be the last. Searches can be refined in the light of the initial results and success attained with the teacher's hidden learning objectives met.

Searching larger databases

In addition to the relatively simple packages purchased by schools which can be compared to card indexes, more complex databases exist which can best be compared to filing cabinets or libraries, depending on their size. They are often used to store collections of documents where the ability to cross reference is important.

The information providers can be private companies or public utilities. In some cases the user is required to pay a subscription charge and charges can also be made for items which are read on screen or saved to disc.

Such databases are accessed by linking up a microcomputer to the phone line using a modem*. They are called 'on-line' databases. When you are connected to the system and making your search, you are said to be 'on-line'.

There is a growing number of public databases, offering both general and specialised services. DATA-STAR (2) is a relevant example, containing as it does the weekly selections from the French and German language press in Switzerland.

To use such databases efficiently requires high level information skills. The development of these skills in itself can be a valuable activity in the language classroom, particularly at VIth form level and beyond, requiring as it does accurate identification of concepts and the matching keywords. A sample search is followed in Chapter 4.

Hierarchical databases

Some on-line and disc-based databases are hierarchical. The user moves through a series of menus to reach the required frames of information as with PRESTEL, CEEFAX (3) and ORACLE (4). The latter are properly called teletext* systems, and are transmitted by TV networks. PRESTEL on the other hand is a videotex* system, transmitted via the phone lines.

PRESTEL has an education arm which joined forces with The Times Network Systems to provide an enhanced service to schools and colleges called CAMPUS 2000 (5). One section is devoted to modern languages. PRESTEL itself is a valuable source of authentic, up-to-date reading materials for EFL learners.

The French TELETEL (6) service is also a videotex system which can be accessed from the UK using an appropriate software package (7) to cope with the technical

differences between the British and French methods of representing characters on the screen. Further reference to this service will be made later.

Some drawbacks to on-line systems

For the end-user there are drawbacks to on-line systems related to cost and to problems of access to the phone line when the information is required. Some information providers are putting their databases on CD ROMs*. Users can then search the information whenever they wish, without incurring phone connection charges, provided that they have a compatible CD player interfaced with their computer. It is likely that this medium will become more widely used for databases, possibly as a subscription service, the user receiving periodic updates. It is one of the routes which NERIS (8) and ECCTIS (9) have decided to follow.

As the expression ROM (Read Only Memory) suggests, the data found in these large databases, whether on CD ROM or accessed via the phone, is entered by the organisation providing the service. The end-user can search and retrieve, but cannot add to or amend the data in any way, until a page or extract has been downloaded*.

Linguistic skills and information retrieval

As we have seen, for both younger and older learners, the skills required for successful information gathering, storage and retrieval are closely related to linguistic processes concerned with categorisation and labelling. These skills, when practised in the target language, become the basis for activities which promote successful language learning. At the same time, they are perceived as worthwhile in themselves by the learner.

As with wordprocessing, the actual skills involved in data handling, whether practised in the student's mother tongue or in the target language have an authentic and growing role to play in our society. This point is not lost on students. The presence or absence of computer-based tasks in a subject can appear as an indicator of that subject's relevance and worth.

It is clear that there are vocational implications for fostering word and data processing skills in the target language. There are also implications in personal terms with developments in satellite technology which suggest that foreign language teletext systems will be available for home viewing by the turn of the century. Italian teletext is already accessible daily for those with a suitable dish aerial and a television capable of receiving teletext. It can be searched in the same way as CEEFAX and ORACLE.

This source of information will be very attractive to educational institutions since no phone connection charges are incurred and the information is constantly updated. For younger learners in particular, the page-based teletext format is ideal and the dynamic quality lacking in paper-based materials is a powerful motivator.

Traditional versus electronic data retrieval

In wordprocessing we have seen how the very nature of text is different from that generated by traditional means. In the field of dataprocessing, the difference between traditional and electronic storage lies in the interaction between user and storage system and also in the effect of the storage medium on the search process.

In a traditional system such as a library the physical activity necessary to identify and gather together items, to say nothing of the problems involved in obtaining copies,

even where copyright is not an issue, does not encourage the scanning of a large number of documents by students.

In a database of newspaper articles, selection is speedy and restricted only by lack of expertise in setting up search criteria. There is encouragement to scan a large number of articles, especially if adequate abstracts are available. Since all sources are scanned equally, any prejudices or preferences which users might have are not taken into account. Articles which might otherwise have been passed over are brought to their attention. The spinoffs in requiring the student to select a document rather than simply receive one from the teacher are considerable, not least in terms of exposure to a variety of texts on which judgement as to their usefulness has to be made.

Skills in a context

As with any activity in the languages classroom, providing a context and rationale acceptable to students is vital when wordprocessing and database work are under consideration. It is the intention of the chapters which follow to consider the potential of these powerful tools in language learning with reference to specific applications, their rationale and learning objectives, their products as recognised by students, the context in which they occur and the way in which they link with other activities, themes and topics.

CHAPTER 2

Wordprocessors: a tool for teachers

The production of printed materials

Whatever other software an educational institution might possess, it will almost certainly have a wordprocessor. For busy teachers and lecturers involved with administration its benefits are clear. Repeat typing of routine letters becomes a thing of the past and worksheet production slick and swift. This is particularly so when a bank of materials has been developed and saved to disc, capable of minor alterations, before being printed, to suit, for example, changes in vocabulary arising perhaps from the introduction of a new text book or from the special interests of class members.

However, it is the intention in this chapter to dwell not so much on the production of printed materials, although these might form part of the overall strategy, but rather on the production of activities in which the students will engage at the computer.

Getting learners involved

The editing* facilities offered by even the most limited wordprocessor are what distinguishes wordprocessing from handwriting. It is these facilities that enhance the learning experience and, when exploited imaginatively, improve the quality of learning. In this chapter we shall explore ways in which learning outcomes are influenced by the application of wordprocessing techniques to activities set up by the teacher for a clearly defined pedagogical purpose.

As we saw in Chapter 1, for students the most powerful reason for using a wordprocessor is that errors can be eliminated with ease from the written text. In order to eliminate errors, they have to be detected, analysed and the correct forms found. This is a cyclical process involving reading one's own work critically, probably several times; seeking help from appropriate sources; making changes; considering the possibility of further amendments resulting from changes already made. These processes are rarely replicated when pen and paper are used. They are brought into play whilst students are either generating their own text or manipulating text generated by their teacher.

Building up communicative competence

When we take into account the shift of emphasis in language learning from a knowledge base to a skill base, the motivation for students to draft, evaluate, revise and amend becomes an important factor in the learning experience. The fostering of any skill requires practice. It involves doing the same thing many times. In the languages classroom this is not always easy to achieve, particularly where concentration spans are limited. However, if computers are involved, students are eager to revise their work, sometimes in their own time.

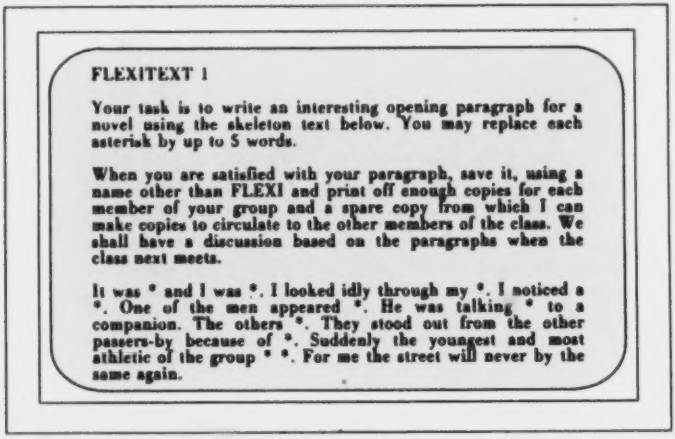
With or without computers, there are several stages along the road to communicative competence, involving exposition, exploration, discovery, practice,

simulated communication and real communication. Vocabulary has to be built up and, as a minimum, an active awareness of structure acquired, if students are to move beyond the phrase book level and have the capacity to manipulate language within a limited range of functions and notions in order to express personal needs in changing situations.

By transferring to the wordprocessor existing exercise types such as cloze procedure, properly contextualised and related to one of the stages in the development of communicative competence referred to above, the student becomes more deeply absorbed into the task and by extension, into the text. There is encouragement to exercise important linguistic skills such as predicting and hypothesising. Students are motivated to go over and over their work until they are satisfied, and there are no resulting holes in the paper!

Gapfill activities

Wordprocessor-based gapfilling activities are easy to set up whether they involve selected gaps or regular gapping. The method of indicating the gaps to students is partly a matter of personal preference, and is partly dependent on the amount of help you might wish to give. In the short example below the gaps are indicated by a fixed number of asterisks. The intention is to encourage speculation on the part of students. Whilst one solution might be more appropriate than another, there is no single 'correct' answer. When the texts are completed by students, working in small groups, enough copies are printed out for the other groups. They will form the basis of a class discussion about the aptness or otherwise of the words selected by the various group.



FLEXITEXT 1

Your task is to write an interesting opening paragraph for a novel using the skeleton text below. You may replace each asterisk by up to 5 words.

When you are satisfied with your paragraph, save it, using a name other than FLEXI and print off enough copies for each member of your group and a spare copy from which I can make copies to circulate to the other members of the class. We shall have a discussion based on the paragraphs when the class next meets.

It was * and I was *. I looked idly through my *. I noticed a *. One of the men appeared *. He was talking * to a companion. The others *. They stood out from the other passers-by because of *. Suddenly the youngest and most athletic of the group * *. For me the street will never by the same again.

Screen displaying a record with field names

Authoring packages

Authoring software* exists which is specifically designed to enable teachers to set up exercises such as the one above. GAPMASTER (1) and GAPKIT (2) are cases in point. The crucial difference between exercises generated by dedicated* software and those generated on a wordprocessor is that in the one there are 'correct' answers, in the other this is not necessarily the case and in any event, there is no feedback as to

whether the word inserted into the gap is 'correct' or not. In packages such as the two referred to above, students receive an indication that they are 'wrong' when their input does not match with the original text or with one or other of the alternatives inserted by the teacher. They might or might not be offered a number of 'help' options such as gap-specific clues, depending whether they are working in 'test' mode or 'tutorial' or 'exploratory' mode. There is no reason why clues should not be available in the wordprocessor-based exercise, but in general the clues come from the context alone, since it is difficult to 'hide' the clues from students until they are required.

Wordprocessor-based exercises versus authoring packages

The two approaches are complementary. The decision about which to use depends on the setting and on the teacher's intentions. Authoring packages are of great value where supported self-study or self-access learning is an option.

Exercises which offer reinforcement of work already done in class or act as an introduction to what is to come, and which give the student immediate comment about the correctness of their entry, can be of great value provided that their wider context is clear to the student and that the text itself is perceived as interesting and the task worthwhile.

The fact that there are 'right' answers does not mean that these are the only permissible 'right' answers, but that, for the purposes of the exercise, these are the ones selected by the teacher for the student's attention. Students do not get upset when what they know to be a correct solution is rejected by the computer. They cast around for alternatives, pulling out words from their passive vocabulary to try out or, making maximum use of the context in which the gap is located, search out possibilities in a dictionary.

If the exercise were done with pen and paper the instant comment would be absent, alternatives would not be sought and the first response would be final.

As we have seen, where gapfilling exercises are done using a wordprocessor, an immediate response from the computer to the student's input is not possible. However, the value of using the wordprocessor rather than pen and paper for such an exercise lies in the opportunity open to the student or group of students to refine their entries as they progress, and the insights into other possible solutions gained during a class discussion.

The value of discussion

The discussion around the keyboard generated by the editing facilities of a wordprocessor is in itself an important factor in the learning process. Even normally silent and withdrawn students are prepared to make suggestions because, although they might be rejected by the others initially, as more gaps are filled in, the need to revise often arises and earlier suggestions inserted. The quantity and quality of discussion is generally high and this, allied to the strong focus and interactive quality of the screen-based task, appears to support those cognitive processes related to successful storage and retrieval of linguistic data.

A rather more directed discussion might take place if a teacher becomes a member of the group. Where it is possible to use a large monitor with a classroom computer, all the wordprocessing facilities and activities referred to here can be used effectively to

introduce, practice and revise teaching points with a group of up to about eight learners.

Using the INSERT* and DELETE* facilities

In the EFL example given above only the DELETE and INSERT facilities of the wordprocessor were used. In completing the task students would have DELETED the asterisks and INSERTED their chosen words. These are editing functions. Essentially, wordprocessors have three sets of functions; those involved with layout and printing, those concerned with file management and those used in editing. In this chapter we are only concerned with editing. Our interest is in flexible text which students can manipulate and reshape just as a small child moulds and remoulds a ball of plasticine.

Information gap activities

As well as using INSERT and DELETE to complete gapping exercises based on specific lexical items or structures, use can be made of these facilities by students to complete information gap tasks. Such activities are easily set in a context which provides a rationale for the activity. The information source can be an authentic printed, audio or video text, or a person. Students can be asked to change or expand an existing text in response to incoming data.

In the activity described below, the target population is a class of fourteen/fifteen-year-olds of average ability and below who have studied Spanish for some 75 hours spread over two school terms. The class are used to working with computers but have learned to use only those wordprocessing facilities necessary to accomplish the tasks set within the Spanish lessons. They were taught these techniques during their Spanish classes. They were not taught how to use the full range of functions. They have one computer at their disposal at the back of the classroom.

Much of their work recently has been based on the topic of school and future careers. They begin the lesson in question by working in small groups of three or four, listening to a tape, played to them by the teacher, of a Spanish girl describing her school day and her thoughts about her future career. Their task is to enter details about Leonor's day and her plans under the correct headings on a form which they have been given. The headings are given in Spanish. Everyone fills in a form. The more able help those who are having difficulties. When the teacher is happy that everyone has got a full set of details, the class groups move on to a circus of activities.

One group goes to the computer and loads* in a file called LEONOR which consists of a third person description of Leonor's school day and her future plans. However, some of the facts are incorrect. It is the task of the group to make any changes which they feel necessary by reference to the forms that they filled in earlier. Before beginning their work, they type in their names in the space provided. If there is a dispute about the accuracy of the facts, they have access to the tape-recorder to check on what Leonor actually said. They have ten minutes to complete the task.

It is important to note that there is no indication in the file of where the errors of fact might lie. Students need to read the text many times in this type of activity, comparing the information on the screen with that on their forms, if they are to be successful. On completion, they print off enough copies for themselves and one for their teacher. When the printing is complete, they load in the original file for the next group, thereby wiping away their own corrected version.

Members of another group have each received a form identical to the one that they completed for Leonor and are busy completing it in their own name.

A third group is working with the teacher, responding to questions about their own school day and their hopes for the future.

Members of a fourth group are completing, in Spanish, their own timetables as part of a package to send off to the exchange school in Spain.

For homework all will receive a written version of Leonor's description of her day. The more able will use the account as a template for a paragraph about their day. The less able will draw up a table with a list of times on the left-hand side and what happens at a given time on the right-hand side, taking all the information from the details given by Leonor.

Had the teacher had available ten computers, perhaps located in the computer room of the school, she might have introduced a wider range of activities generated on the wordprocessor.

She could have provided a file containing Leonor's first person account which the group was required to turn into a third person account. She could also have made up a file containing a first person account in which all the 'facts' had been removed so that the students could have filled in their own details. She could have provided a file containing the blank form used during the listening activity so that students could have made use of the facilities of the wordprocessor when completing their own version.

Pupils work eagerly through a series of closely connected activities such as these and benefit greatly from such a sharp and intense focus to their work. There are clear indications that students acquire a knowledge of structure and assimilate lexical items during such sessions and that the carry-over into activities beyond the computer room is considerable and lasting.

Setting-up more complex activities

More complex linguistic problem solving activities can be set involving the INSERT and DELETE functions. Imagine that some weeks ago you received a letter from friend A describing his plans for their summer holidays. The holiday has now taken place and everything went according to plan with the exception of one day which the friend described to you on a postcard. Friend B has written to you and in the course of her letter has asked you what friend A did during their holiday. You pass on to your class the task of reporting to friend B the holiday activities of friend A. By sheer good fortune friend A sent his letter via electronic mail and you have it on disc as a text file*.

The students' task is to load the electronic mail* file into the wordprocessor and edit it as necessary to change from 1st to 3rd person, from immediate future to past tense and, making use of the information on the postcard, to amend the information where necessary.

It must be remembered that many of our young people are familiar with wordprocessing concepts and do not find the above activity as far fetched as it might seem to those of us for whom individual handwritten letters are a way of life. The sheer quantity of 'personalised' love letters churned out by individuals during lunch time computer club sessions demonstrates well that the possibilities of the medium have not been missed!

Sustaining motivation

Given that the students will find the task above acceptable and recognise the value of the editing skills that they are practising, their anticipation of success will sustain them through what is a difficult yet valuable task. Without the editing facilities of the wordprocessor such an exercise would scarcely be worthwhile, since the main effort would go in the low level skill of copywriting, rather than on the higher level skills of establishing what has to be changed, deciding how it should be changed and assessing the effects of the changes on what follows, to say nothing of the revising that will occur in the desire to succeed.

This type of task is helpful in focusing the attention of students on a particular aspect of grammar whilst involving them in a puzzle, the solution to which is within their grasp given judicious intervention by the teacher and an adequate supply of reference sources.

Moving blocks of text within a document

Activities such as those above offer practice in a range of linguistic sub-skills drawn from both reading and writing. Use of the BLOCK* functions tends to be more obviously applicable to the support of reading skills. However, sensitivity to the way in which a text hangs together also has implications for competence in the written language.

In one way or another the majority of wordprocessors allow the user to mark blocks of text and to MOVE, MOVE and COPY and DELETE these blocks. The blocks can be as small as a single word or as large as a page or more.

Sequencing activities

Students gain important insights into how a text is organised through sequencing activities. These can be set up using strips of paper, but are much more conveniently and lastingly organised using the BLOCK functions of a wordprocessor.

Any wordprocessed text can be 'jumbled' by using the BLOCK functions, and 'unjumbled' by the same means. However, it is important for the setter of the task to be aware of the effects of the actions of the students if chaos is to be avoided. Each 'jumbled' section should begin on a new line. On completion of the exercise the text can be formatted* to form a single paragraph if required.

It is unwise to jumble smaller units of text than single lines if students are not to lose their way. However, if they do find themselves in a muddle having made a number of changes, they can make a printout of their existing text and reload the text file that they started with.

The example below simply requires the student to move the blocks of text around to match the series of pictures.

More complex tasks can be produced where lines rather than self-contained units of text are moved around to fit a given scenario represented by an authentic printed, audio or video text, or a series of pictures or a diagram. This form of 'unjumbling' demands higher order skills than those in the example above, requiring students to react not only to the global meaning of a section of text, but to the problems of collocation.

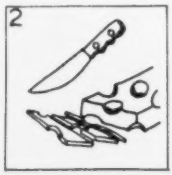
GOUGÈRES

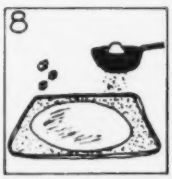
Préparation : 20 minutes
Cuisson : 40 minutes

Ingrédients pour 6 personnes :

150g de farine
1 pincée de sel
un peu de poivre
4 oeufs
60g de gruyère râpé
1 morceau de gruyère de 40g
100g de beurre
1/4 litre de lait

Cassez les oeufs et incorporez-les un à un à la pâte: ajoutez également le gruyère râpé, le poivre et les lamelles de gruyère.
Coupez le gruyère en lamelles fines.
Beurrez et farinez une tôle à pâtisserie: déposez-y la pâte en cercle.
Faites chauffer le four à température moyenne.
Retirez à nouveau la casserole du feu.
Servez tiède ou froid.
Pour préparer une pâte à choux, faites bouillier dans une casserole l'eau avec le sel et le beurre.
Remettez la casserole sur le feu et remuez jusqu'à ce que la pâte se détache des parois de la casserole.
Faites dorer dans le four.
Retirez alors la casserole du feu, saupoudrez avec la farine et mélangez bien.





Punctuation practice

Other tasks which encourage an understanding of how text hangs together are those which involve the insertion of punctuation and the making of paragraphs. Both of these activities are technically easy to set up and to perform. The first requires the simple INSERTION of the necessary punctuation marks. The second is achieved in different ways according to the wordprocessor used. Usually all that is required is to place the cursor below the first letter of the first word of the proposed new paragraph and press the RETURN or ENTER* key twice. The word indicated will move to the left hand margin of the next line but one, leaving a blank line below the previous paragraph. All text which follows will be automatically reformatted. In others the function keys* are used.

Utilising the SEARCH facility

The majority of wordprocessors have a facility which allows the user to SEARCH* for a given word and to REPLACE* that word, throughout the text, by another. This is known as a 'global' REPLACE. Some allow the user simply to SEARCH for each occurrence of a word or to SEARCH for each occurrence and then to REPLACE or not. The latter is the most helpful facility for language learners. When you have specified the word for which the computer is to SEARCH, the cursor will move to the first occurrence of that word. If you indicate that you wish the word to be changed to the alternative that you specified, the word will change instantly. If you decide against making the change, the cursor will jump forward in the text to the next occurrence of the word.

If you intend to exploit these facilities with students, you should check carefully how your wordprocessor handles both SEARCH and REPLACE, singly and in combination, before designing your tasks.

The use of the SEARCH facility is particularly helpful in focusing the attention of students on ways in which words behave in different contexts. They will retain much more from the process of exploring, observing and reporting back on what is happening, rather than by being told. An investigation by students of the various functions of the word 'do' in an English text involving an interview about what a person does in their spare time would be accomplished very effectively and efficiently by using the SEARCH facility. There is no doubt that it could be done by the students simply scanning a printed text. However, the dynamic process of being catapulted to each occurrence of a word sharpens awareness and no occurrence is missed.

The use of the SEARCH facility in this way can often be the starting point of a range of activities at the computer. Perhaps the teacher has prepared a jumbled version of the same 'spare time' text which, with the advantage gained from the clearly directed initial activity, students will 'unjumble' rapidly before going on to a conversion of the reordered text into past tense reported speech. The final activity might be a SEARCH for 'did' and a comparison between the number of occurrences of this word in the reported speech and 'do' in the original interview.

Pattern recognition and reinforcement

The combined use of SEARCH and REPLACE can prove useful in establishing linguistic patterns visually. This is particularly helpful with younger learners as

reinforcement for structures already heard and spoken. The following example is aimed at eleven-year-old beginners in French who have learned to tell the time. They are encouraged to SEARCH for the various numbers of asterisks in the text, in ascending order and to tell the computer what to replace them by. For example, if they decide that ** represents 'il', they can ask the computer to SEARCH for ** and REPLACE with 'il'.

When they have established the patterns in the first six sentences, they are invited to complete the remaining six, DELETING the dashes and INSERTING the correct words.

To accompany the wordprocessed file they would have pictures of a series of clocks, in various styles including digital, the times on which would correspond to the times in the file.

** *** 3 ****.	3.00
** *** 5 **** vingt.	5.20
** *** 6 **** ***** ******.	6.30
** *** 9 **** ***** *******.	9.15
** *** 2 **** ******** dix.	1.50
** *** 7 **** ******** ********* *******.	6.45
-- --- 8 -----.	8.00
-- ---11 ------.	11.00
-- --- 10 ------ -- -----.	10.30
-- --- 4 ------ -- -----.	4.15
-- --- 9 ------ ----- cinq.	8.55
-- --- 3 ------ ----- -- -----	2.45

The scope of SEARCH and REPLACE

The uses to which SEARCH and REPLACE can be put are as wide as the teacher's imagination and style permit. They can range from the very simple example above to complex tasks where, with judicious selection of words to SEARCH for, and perhaps to REPLACE, in a lengthy text, it is possible for advanced students to alter the style or tone of a text.

By giving students a list of target words to search for, their awareness of the importance of the words in conveying the tone of the text is sharpened. In a task of this type which invites students to explore, in a dynamic way, the techniques of setting the tone of a text, it is advisable to suggest that not only should they make use of SEARCH and REPLACE but also go on to edit the text, using INSERT and DELETE, in order to make it convey more accurately the changed tone.

In this way the shift is made towards giving the student the freedom to select the facilities most appropriate to the task, once the initial 'sharpening up' activity has taken place. In the following chapter we shall look at the wordprocessor as a tool for the student as a writer where the emphasis will be more on the development of writing sub-skills than on reading skills and the acquisition of structure and vocabulary.

CHAPTER 3

The student as writer

Success and failure in writing

As we saw earlier, the wordprocessor offers a number of facilities which encourage the young writer since they are conducive to success rather than failure. Many of our young people find writing in the target language by far the most difficult of the four language skills. Against the presumed 'perfect' native speaker model, they feel doomed to failure. Even with the recognition that not all native speakers write flawlessly, and with greater tolerance of error on the part of teachers, there is still, in some cases, a distinct lack of enthusiasm for written tasks.

However, many teachers believe that writing in the target language is at least a valuable reinforcement tool and that at best, it gives those able to handle it well the kind of power which command over the written word gives them in their mother tongue. There are many stages in between these two extremes which might well be easier to achieve with a wordprocessor for a larger number of students than at present.

Wordprocessing and successful writing

There is not the space here to discuss at length the many reasons that contribute to the lack of enthusiasm for written tasks referred to above. We shall therefore concentrate on two possible causes that the use of a wordprocessing package might overcome.

Firstly, and most importantly, fear of making incorrigible errors is removed. Mistakes cease to be permanent features signalling failure. Writing in itself becomes part of the learning process rather than a demonstration of knowledge already acquired, or not, as the case may be! It becomes an activity, a series of processes, not an end product to be criticised, however kindly. With a wordprocessor children want to write and to keep on writing. This need not be to the detriment of speaking, listening and reading, but it does mean that the development and practice of the other three skills need not be to the exclusion of writing because writing is deemed to be demotivating.

Secondly, because the wordprocessor produces a final copy which is not only acceptable in terms of the language used but which also looks as good as anything produced professionally in an office, many more occasions can be found to offer the child or group of children a real audience for their work. Preparing work for display no longer need require slow and careful copying, but a selection of appropriate typefaces, a brief discussion about layout, a few moments spent in reformatting the text and fewer seconds whilst the printer does its work. These are all creative and engaging tasks involving skills which children value for themselves. Using them in a foreign language context bestows prestige on the subject, particularly in the eyes of young learners.

By working on wordprocessor-based tasks set up by the teacher and also by using the wordprocessor as a writing tool, children can be led successfully and pleasurably through the stages of acquiring the building blocks for writing, learning how to put

them together in a meaningful way and finally to gain expertise in composition skills in the target language.

Some practical considerations

All that was said about the benefits of wordprocessing in the previous chapter applies equally to the child as a writer as to the child as the student working at written tasks set up by the teacher. We shall, therefore, concentrate in this chapter on the settings in which children can become effective writers in the foreign language. We shall assume only one micro in the classroom, although this does not preclude the possibility of booking the computer room on a regular basis. The majority of tasks can either be done by a full class in small groups simultaneously or by small groups taking turns at the one micro in the classroom within a circus of activities.

It is becoming increasingly likely that students entering secondary schools will have keyboard skills. That is, they will know their way around the computer keyboard, they will be able to load programs and will understand that programs are stored on a floppy disc. Many will have had experience of wordprocessing in their primary school and will understand the essential concepts referred to in the previous chapter, namely INSERT, DELETE, BLOCK functions, and SEARCH and REPLACE. They will probably have used a wordprocessing package other than the one that you are proposing to use with them and, possibly, a different computer.

Some preliminary questions

If your school does not set out to teach wordprocessing to each and every student from year 1, with a package which suits your purposes (i.e. with accented and special characters), you should discover in advance of any classroom use the answers to the following questions:

- Do the students know what text files are, that they can be saved and loaded again later to be added to or changed?
- Do the students have previous experience of wordprocessing? If so, in practical terms, which facilities are they familiar with?
- Are they familiar with the wordprocessing package that you intend to use with them?
- Have they used the wordprocessor simply to produce fair copies for the wall, or are they used to drafting, evaluating, checking and revising their work?

If you discover that only a small minority have worked with a wordprocessor before, you have to consider whether the benefits to be gained by using this flexible tool justify the time spent on developing the skills required. You may find yourself already under pressure of time and decide against using the wordprocessor for the moment.

On the other hand you might decide that, despite the fact that few of your students have had wordprocessing experience, you would like to build up their skills in this area because of the contribution that such skills will make to their language learning. Under these circumstances, it is probably wise to begin with the kind of tasks

described in the previous chapter, working through the various functions until you feel that the students are ready to take the initiative and create their own texts.

Beginnings, middles and endings

When students embark on writing using a wordprocessor, the blank screen can be just as daunting as a clean page in an exercise book. A good way to get them started is to give them the beginning and ending of a text, and considerable support in what they might write in between. The 'middle' can be as long or as short as the students wish to make it. The physical gap in the text will expand to accommodate all that they write.

A class of young learners of English might be asked to work in small groups to write a description of a member of the class to which the other groups will be invited to put a name later.

They could be given a starter sentence such as:

'This person has.....'

followed by a list of all the features that they would be expected to include, such as:

face, nose, hair, eyes, eyebrows etc.

The final sentence might be:

'Their name is: .....'

In other scenarios data for the missing section could be provided by an audio or video tape which students would be encouraged to play as often as necessary for the successful completion of the task.

Form filling

Form filling is another easy way into wordprocessing. This still relies on the teacher making up the starter file and thereby influencing the content of what the student writes. Activities can range from the giving of simple items of information expressed in one or two words to more complex responses, such as the expression of opinions relating to, for example, various aspects of a package holiday in a post-holiday questionnaire put out by a travel company. It is important to be aware of the need to match the wordprocessing task both to the student's linguistic ability and to their wordprocessing ability.

Dialogue completion

Another useful text type is dialogue. The student is presented with one half of a conversation and is invited to complete the other half. Support can be given as appropriate. Such support might consist of providing a written report of the conversation or of giving older students a description of the views of the person whose 'part' they have to write in connection with the topic under discussion.

This kind of activity is best undertaken in small groups where the discussion, revision, checking and changing will add greatly to the learning experience. The degree

to which the task is authentic will depend on the way in which it is presented. If the task is seen as a preliminary to role playing, care should be taken to make students aware of the difference between the written and spoken language, to avoid dialogue written to be read, not spoken.

Taking a more open-ended approach

When individual pupils are ready, they can move on to increasingly open-ended tasks such as letter and report writing. They can work at these tasks individually or collaboratively.

Classroom relationships

Once a teacher moves away from a didactic approach, giving more responsibility to students for their own learning, encouraging independence of thought and action on the one hand and co-operation within a small group on the other, relationships between teacher and students change along with the inevitable physical change in classroom layout. No longer is the teacher at the front, safely cut off from the class by the barrier of a desk, but here, there and everywhere, not always noticed by students busily engaged in their tasks. This scenario presents teachers with a different set of problems than those posed by a more traditional approach. The management of activities and resources comes high on the list. However, there are other, less obvious problems which can affect learning processes and outcomes.

When to intervene

Once the teacher becomes manager and facilitator, she has to take decisions constantly about when to intervene in the work of a group or individual and when to leave them to sort out problems for themselves. Injudicious intervention results in students losing their sense of responsibility for and control over their learning. They wait to be told, fail to become committed, become bored instead and learn little. This is particularly true of wordprocessing where trial and error are an essential part of the learning process, not something to be avoided in the dash for the final product.

When students are wordprocessing, the question of intervention arises constantly. As a teacher, you observe the mistakes as they are being made. You see children getting themselves into deep trouble. You know that a few deft keystrokes would put it all right. The temptation is to move into 'flying finger' mode, explaining briefly what is wrong whilst leaning over the students at the keyboard and making the necessary changes to their text. The effect of this on students is devastating in terms of motivation and is detrimental to learning.

In deciding whether or not to intervene, you need to ask yourself the following:

- Will the error have knock-on effects which will lead to ultimate failure?
- How capable are the students concerned at detecting their error and correcting it unaided?

- What support, such as dictionaries or grammar books, can be offered to allow them to correct the error if they are helped to detect it?

- If students are getting along nicely, but with a few minor errors in their text, will you interrupt them or wait until they provide you with a printout, giving you the opportunity then to discuss their errors?

- Even then, will you necessarily point out their mistakes provided that communication of the message is not impaired?

Acceptability and perfection

It is for the teacher to decide on the level of error that she is prepared to tolerate from each individual student in the final version of any document. It is a mistake to confuse acceptability and perfection. The student will experience success if their work is acceptable to their teacher even if remaining mistakes are pointed out to them. According to the kind of people that they are, they might request help from their teacher to correct the errors, or they might acknowledge that whilst not perfect, for them, the piece of work represents a satisfactory achievement.

We have learned through bitter experience that an insistence on perfection is demotivating and counter-productive for many of our students. Care is needed to avoid making the new technologies a reason for taking a negative step backwards. In the eyes of the students, ultimate success and failure have everything to do with the verdict of their teacher, whatever medium is used to produce the work under review. That verdict is more likely to indicate success where the teacher makes judicious and creative interventions during the production process, taking into account the individuals with whom she is working.

Settings and contexts for writing

It is unlikely that many foreign language teachers will find themselves in the position of having one computer for each student for some time, certainly within the eleven to sixteen age range. It is doubtful whether such an arrangement would be necessarily beneficial where young learners are concerned.

However, for young people of sixteen and above, there is value to be derived from individual use, the same value as experienced by anybody writing for professional or personal purposes. When critical awareness is sufficiently well developed and the techniques of drafting and revising have been mastered, students are likely to produce well-structured texts showing evidence of planning, evaluation and careful error detection and correction.

Collaborative writing

With regard to younger learners, there are positive benefits to be gained from group writing, particularly in the early stages of coming to terms with a new text type, topic or major structural item such as the formation of a new tense. Pupils show a willingness to experiment with language, to explore possibilities, to evaluate and to revise.

In the example below, students in their fourth year of learning French have been

set the task of writing a short report on a five day stay in Dieppe for their school magazine and also to send to their exchange school. They have an assortment of brochures and other realia to help them.

The group is composed of four students of varying abilities. They have been asked to prepare a draft of their report for the other members of the class to comment on. They are used to wordprocessing their work and begin by 'brainstorming', typing in their ideas in note form, mainly in French. They pay no attention to form. Where they cannot remember the French word to express what they want to say, they type in the English word(s). No one student tends to dominate the keyboard as they take it in turns to type in what is in their mind.

When they feel that everything of importance has been noted down, they allot tasks. One person operates the keyboard, another checks the input, dictionary and grammar reference to hand. The other two members of the group sort out what is to be typed in, making extensive use of the authentic documents and calling on their colleague who has dictionary and grammar at the ready. There is much discussion on every aspect of the text, individuals are called upon to justify their request for corrections and many changes are made. After a full hour the first draft is deemed to be ready. It is saved to disc and then two copies are printed off, one for the group and one for the teacher.

During the double lesson that it took to prepare the first draft the other members of the class have been engaged in a range of activities some of which the wordprocessing group will catch up on later.

At the next meeting of the class, copies of the first draft of the report are distributed and comments invited. Checks are made on the accuracy of both content and expression. Alterations are proposed and any alteration accepted by the class as a whole is noted down by a second group of four whose task it will be to edit the original. This editing will take place during the next double lesson when the first group will make up some of the work missed when they were busy at the computer.

The second group will assume various roles when working at the computer, as the first group did. They, too, will bring their work back to the full class and comparisons will be made between the two versions and checks carried out to ensure that all amendments have been made. Any last minute editing will be done and a letter written by a third group to the exchange school to accompany the report and to thank them for their hospitality. The letter will be written, reviewed and edited in the same way as the report.

Letter writing

All forms of letter writing naturally lend themselves to wordprocessing. The letters, as in the above example, can be written for real people to meet an authentic need. There are times, however, when this is not possible. Equally there are times when practice is more relevant to learners' needs. Under these circumstances, the student might be given a starter file containing a stimulus letter and the names of supplementary 'help' files which can be read to provide help. Each file might, for example, relate directly to a question in the stimulus letter which has to be answered.

Coping with a range of abilities

By providing 'help' facilities it is possible to support the less able in a group, should

they choose to call upon that help. Different levels of help can be given, such as a short comment to beware of certain difficulties, a list of relevant vocabulary or a gapped sentence in reply to a question in the stimulus letter which can be moved as a block into the reply and the gap filled. The 'help' files can be loaded in as required and then deleted from the text.

Once students have access to a larger number of more powerful computers than is possible at the moment, the opportunity to offer varying levels of access to the same task will have important implications for the way in which we view and plan our students' learning. It is also important to be aware of the potential advantages and disadvantages which the availability of spelling checkers, computer-based dictionaries* and thesauruses* within wordprocessing packages will bring to the classroom.

Documents for display

In schools where wordprocessing across the curriculum is an established practice, displays of children's work frequently include well laid out written contributions set in an appropriate typeface. The production of such work is a source of pride to the students concerned and gives them a sense of purpose often lacking in written work, whatever the subject.

Until recently there was little software available to enable similar displays to be mounted in a foreign language. However, that situation is being remedied slowly and printouts using a range of different typefaces, in different sizes, with accented and special characters are becoming available for the majority of machines currently in use in schools.

This opens the way for the production of a number of different types of documents for public consumption which will look as good as any produced elsewhere in the school.

In some schools desktop publishing (DTP)* is already well established. Rarely are modern language departments involved. This is sad since the materials produced are of a high standard and our young people are becoming increasingly critical of the appearance of printed matter. The Apple Mac* computer, often at the heart of a school DTP system, produces accented and special characters with comparative ease, as does the laser printer* frequently used as the output device* in such a system. Work prepared by children in the classroom using the VIEW (1) wordprocessor on a BBC computer can, with the aid of a piece of software called VIEW>>MAC (2), be read into an Apple Mac and printed out on a laser printer. Accented characters should not be used in the original text, but edited in on the Apple Mac.

A note of caution has to be sounded in connection with DTP. Software packages which allow text and graphics to be combined and which offer accented and special characters are very alluring. However, it is vital to bear in mind the linguistic competence of the learners when setting up IT-based tasks. For English students, the prospect of producing a newspaper in German and printing off copies for parents and friends might be very exciting. However, the excitement will soon wear off if the production of the level of German is beyond their linguistic competence and, instead of the anticipated public success, they are opened up to equally public failure or have to resort to excessive copy typing.

Writing for an audience

In addition to wordprocessing for a variety of audiences, students can use VIEWDATA* packages to produce information-giving carousels for parents' evenings. The same information can be given in different languages in sequential frames. Since the area to be covered in each frame is limited, and much of the language required likely to be known by students, this is a way for them to compose something for a larger audience than usual. There are a number of different packages available, which all have their own peculiarities. They all have editing facilities, some more limited than others. Accents are not usually available. It is a piece of software often found in secondary schools.

Consequences

Since it is usually possible not only to move sequentially through a VIEWDATA carousel, but to choose different routes through the frames, the medium lends itself to the production of branching stories or a form of consequences in which only three or four frames are involved.

A class, broken down into small groups, could all be given the same starter frame, for example: *En traversant le Pont Neuf, j'ai rencontré une femme sinistre.* The second frame could begin *Je lui ai dit...*, the third *Elle m'a repondu...* and the last *Par conséquent...* .

Each group would then write their endings for the different frames. They would have frame numbers allocated so that all the frames produced could be used in the final structure. For example, group A would have frames 2, 3 and 4, group B would have frames 5, 6 and 7, and so on. When all the frames were completed it would be possible to move to 2, 5 etc from frame 1 and from these frames to any one within the third tier, and so on to the fourth tier. The resulting database could be read with amusement by parallel classes and those higher up the school. There would be many non-sequiturs and students would need little encouragement to find and note down as many routes as possible which made some sort of sense. They might also be asked to explain orally why certain routes were quite impossible.

Electronic mail

It is possible with the use of a modem connected to a computer and to the telephone line to send messages electronically.

Messages are stored in a particular destination 'address' on a mainframe* computer from which they are collected by the addressee. Currently such an exchange of mail is possible between schools in the United Kingdom and Western Germany using the Campus 2000 system. Links with any country on the DIALCOM (3) network are also possible through Campus 2000. However, at the time of writing, links with France are impossible through this route and technically difficult by any other. The opportunities for EFL teachers to set up communication networks involving a large number of countries are great.

There is no doubt that once the technical problems have been solved there is potential in international electronic mail for all language teachers, not least in the administration of exchange visits. For students it would provide a real readership in the target language. Since it is virtually as easy to mail many addressees as to mail one,

and since communication is almost instantaneous, all kinds of communication possibilities open up.

As yet there is little to report of its value in foreign language learning since technical difficulties and the nature of the secondary school timetable make its use problematic. However, some schools are persevering and this is undoubtedly an area to watch.

In this chapter we have looked at approaches to writing which involve collaboration and in which the processes required to create the end product themselves enhance and extend the learning process. This approach applies equally to the setting up by students of a number of different kinds of database, which is the subject of the next chapter.

CHAPTER 4

Pupils as information handlers

Different types of database

As we have seen earlier, databases are collections of data which are structured in a way that is appropriate to the topic on which the collection is based and that reflect the kind of information which the user will want to retrieve. They can be bought as a floppy disc, accessed via the telephone lines (e.g. PRESTEL and TELETEL) or accessed via the TV (e.g. CEEFAX and ORACLE).

Different screen presentations

There are two main presentation formats, frame-based, where information is presented in 'screen-fulls', like the pages of a book, or scrolling text, where the information moves up the screen. The former style is used to convey short pieces of information, such as the weather forecast, or information which can be readily tabulated, such as a train timetable. The scrolling style is better fitted to longer texts such as newspaper articles.

Linguistic functions and data processing skills

There are strong similarites between the linguistic functions such as the following which appear in notional/functional syllabuses:

- identifying people, places and things
- seeking information about people, places and things
- checking information
- correcting information
- finding out about likes, dislikes, preferences or interests
- drawing inferences

and data processing skills such as the following:

- seeking information
- structuring information
- selecting information
- classifying
- evaluating information
- manipulating information
- retrieving information
- drawing conclusions from information retrieved.

Databases as enquiry-based tasks

It is often easy to decide on the linguistic skills which you wish your students to develop and practise. It is sometimes more difficult to create a context in which this development and practice can take place. This is particularly true of skills which demand the requesting rather than the giving of information. The gathering and structuring of information for inclusion in a database are in themselves valuable skills with a high linguistic content directly related to information seeking.

The setting up of a database, where the students seek out the data, type it in and later search* it to draw conclusions from the information retrieved, provides an excellent vehicle for the encouragement of pro- as opposed to re- active language skills. The related activities are entirely at one with a communicative methodology in a world where information will be carried increasingly by electronic media as well as traditionally in books, on the radio and on TV.

Dedicated and DIY database

We saw earlier that some databases exist on remote computers, offering a store of information to their clients which they may access, but which they cannot change. Such databases are dedicated to the purpose(s) for which they were set up. For example, the NERIS is dedicated to the provision of educational resources. It is possible to buy dedicated databases for use on a micro. These are clearly more limited in scope than those such as NERIS which are located on mainframe computers. However, they have their place in the classroom and we shall look later at a particular example.

By far the richest environment for developing information-seeking linguistic skills in students is database creation, that is, obtaining and inputting the data as well as searching it. In order to do this, you need to obtain a database management system - a rather intimidating name for a piece of software which allows you to plan your own database, to insert data and to retrieve it: a do-it-yourself database.

A typical DIY database

DIY databases can be compared to card index systems. They consist of a number of records which represent the cards. Each one of these records contains a number of subheadings which are called fields. The database management system will place limits on the number of characters that you can have in a field.

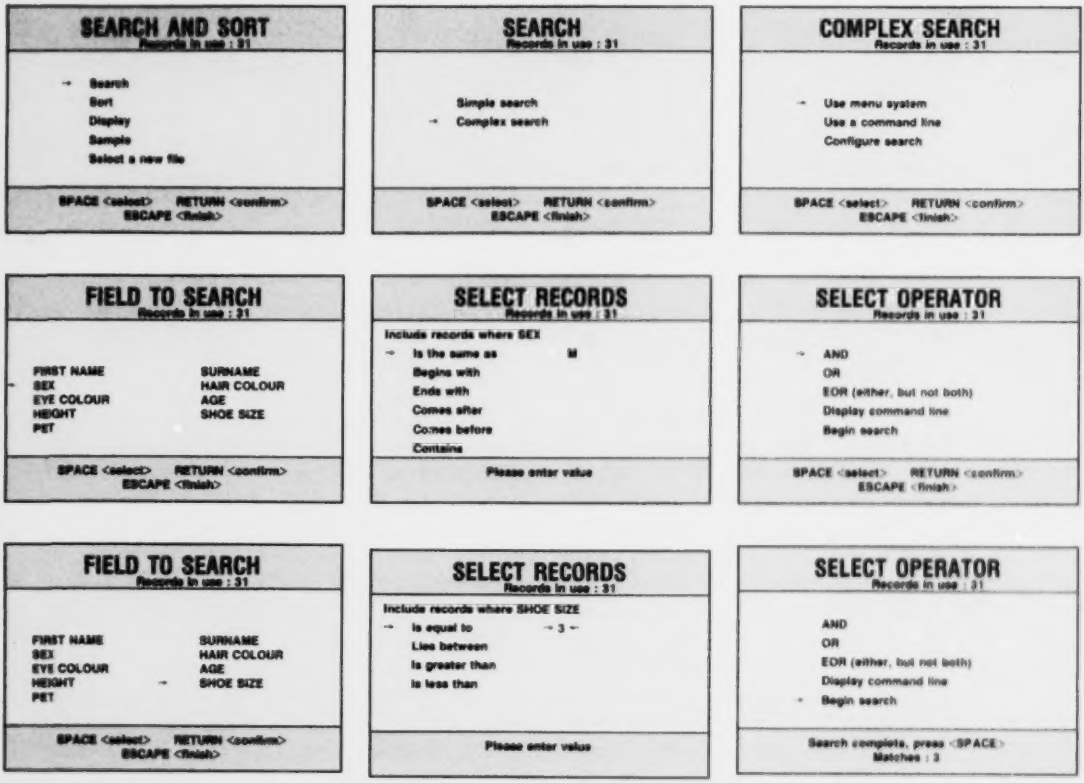
Primary school pupils make wide use of databases. A favourite starting point is often the pupils themselves. The database might well be called 'Our Class'. Each record will represent a member of the class. The fields will include the following:

first name
surname
sex
hair colour
eye colour
age
height
shoe size
pets

In one class the teacher might wish to allow each person to enter their own details. In another class one group of children might be asked to obtain data from another, type it in, get a printout, get the people concerned to check it for accuracy and correct as necessary.

Once the data has been typed in, it is possible to formulate questions in order to make some general comments about the class, for example, how many of the children keep goldfish, who has blue eyes, what is the largest shoe size worn by a member of the class ... and so on.

In a typical class of thirty children, the following is the search route to discover which boys take size 3 shoes.



Choosing a database management system

Some limitations

Before embarking on setting up a database, it is important to check carefully the following points in connection with the software that you intend to use:

- Is it possible to have accented and special characters such as ç, and ñ. If not, is it acceptable without?
- Are there a fixed number of records, or does this depend on the number and size of the fields?

- What is the maximum record length?
- What is the maximum field length?
- What is the maximum number of fields per record?
- How does the program display the records on screen?
- How does the program display the records on paper?
- How does the program search and sort data?
- How does the program display the results of searches on the screen and on paper?
- As well as textually, how can information be represented?

There are a number of databases which have been specifically designed for education using BBC micros, but which, sadly, do not offer accented and special characters. ML FIND (2) is the exception in that a special modern languages version is under development which will offer not only facilities for inputting data in the target language, but also on-screen commands and instructions.

However, since native speakers of the languages with accents and special characters do not necessarily find their lack an insurmountable problem, you might well be happy to use whichever database is already in use in your institution. Your students might already be experienced users, which will have the benefit of allowing them to concentrate on the information itself, rather than the running of the software.

For those with Apple Mac and PC compatible computers* it is possible to obtain accents in standard packages, if somewhat clumsily, by using the ALT key* and the relevant character code*. It is also possible under certain circumstances to reconfigure your keyboard for the language required and to then run a standard package with the relevant accents and special characters. Further details of both methods of obtaining accents can be found in Chapter 6. If you follow this path, you need to be aware that the use of accents might well cause some odd results in alphabetic sorts, accented characters being placed after 'z'.

Databases and linguistic skills

Language is essential in classifying information. In the foreign language classroom, it is vital that students make the link between vocabulary and concepts. Establishing fields for a database can be very helpful in this respect as can the identification of the information which the students will want to obtain from the data. As the students are in control of the database, the language used will be at the level that they choose. In some cases they will use previously learned words to define their fields. In others, where they feel that they do not have the appropriate word in their active vocabulary, they might well go first to the dictionary and then to their teacher to seek confirmation about the word(s) that they have chosen.

Setting up a database

Let us follow a group of fourteen-year-old English students who have studied Spanish for two terms. They want to compare and contrast information about themselves with the group of students in Spain with whom they exchange letters. They are interested in their friends' families, their spare time occupations and favourite sports.

Deciding on the structure of a record

As we saw earlier, databases consist of a series of records. Each record has specific information stored in a number of fields or subheadings. In the previous example, it would have been necessary first to discuss with the children the categories of information that were necessary to identify individuals. These categories became the fields. It would also have been necessary to find out what kind of information they wished to obtain from their database. A field called 'sex' was essential since they wanted to be able to find out information specific to the boys in the class, and to the girls.

The Spanish students with whom our class correspond attend a state boarding school. The English students think that it might be interesting not only to find out what pastimes and sports their friends enjoy, but to find out if where they come from has anything to do with their choices. They decide that in addition they want to compare Spanish and British family sizes. They will obtain their information from a written questionnaire and recorded questions.

Working out field names

As a result of this initial discussion they realise that if they want to make comparisons between themselves as British and their friends in Spain as Spanish, they will need a 'Nationality' field. If they want to compare family size, they will need a 'number in family' field.

When they begin to consider in detail the kind of questions that they might wish to get answers to, regarding the relationship between the areas from which their friends come and their leisure time interests, they will have to offer a series of descriptions from which their friends can choose if later searches of the data are to be successful. The following is a list of headings which are likely to emerge from the class discussions on which the questionnaire and audio questions will be based and which will become the field names.

Nombre
Apellido
Edad
Sexo
Nacionalidad
Domicilio
Paisaje (montaña, mar, campo)
Deportes
Pasatiempos
¿Quántas personas hay en la familia?

Using language skills to gather information

Once the fields have been established, the data has to be obtained. As a class the students work out a questionnaire which is then wordprocessed by a small group, duplicated and sent to Spain. Another small group decide that they want to tape their request for information, so they work out their questions by expanding the headings in the questionnaire with help where necessary, and the recording is made. A transcript is enclosed so that the students in Spain can reply individually on tape if they wish. A third group work out the precise field names, again basing their work on the questionnaire, making adjustments where necessary to fit in with the FIND database management system.

So, listening, speaking, reading and writing skills are already in purposeful use. The suitability of database work to develop question formulation skills is much in evidence.

Searching the database

Once the data has been obtained, typed in and checked - involving students in vocabulary reinforcement, reading and writing in the target language - there will be further opportunities for formulating questions when the students search the database. If considered appropriate, there will also be the opportunity for the discrete drilling of linguistic functions such as giving reasons why a statement is true or false.

When the information has been typed in, the following question types can be explored.

> In which country, Spain or England, would you expect to find the largest families? Provide evidence from the survey data to support your answer.
>
> How many of your Spanish friends who live in the mountains like skiing? How many of them like swimming?
>
> In what sort of area do the majority of people who like swimming live?
>
> 'More Spanish girls than English girls in the survey enjoy going to the cinema.' Provide evidence to support or contradict this statement.

It is also interesting to give students statements which they have to prove or disprove, giving evidence in support of their decision.

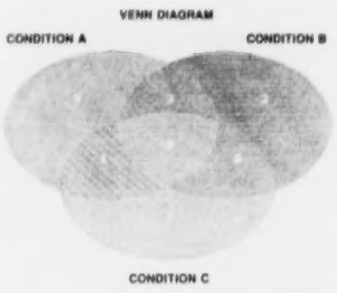
An analysis of the activities, linguistic functions and skills employed by students engaged in the work described above reveals much that is of great relevance in a communicative methodology. More importantly, from the students' point of view, the project had a purpose and an end product which could be used by others and valued by them. There was a reason for requesting the information in the first place, a genuine desire to find out the answers to the questions posed during the searches, and pride in the accomplishment of high level, authentic tasks.

Different forms of presenting information

Many databases in use in schools offer facilities to display the information obtained

from searches in a number of ways other than a printout of the record or records concerned.

Appropriate information can be displayed graphically in the form of bar charts, pie charts and graphs.



Condition A	Condition B	Condition C
SEX EQ F	HEIGHT EQ 175	SHOE SIZE EQ 12.00

The ability to be able to represent information in different ways is of great value to linguists. It provides the basis for oral work in which questions requiring comparatively complex responses can reasonably be expected since the content is available in a non-verbal form. It has simply to be explained. Such visual representations of information can also provide the basis for written work which in turn will involve reinforcement of the vocabulary and structures already used in the gathering of the information and the searches made.

Classroom management

It is not necessary to have a room full of computers for database work. Small groups of children can type in the data and, again working in small groups, the children can take it in turns to make their searches when the database is complete. The micro has a real contribution to make to the management of learning in a circus of small group activities, giving reasons for completing tasks prior to using the computer and providing the context or relevant information for tasks to be completed when the keyboard session is over. A printer is vital, especially in the production of stimulus materials involving graphical representation of data for use away from the computer.

Disc-based dedicated databases

There is not always the time to gather information for a database. However, those skills involved in querying a database can be practised by using ready-made, dedicated systems which you can search, but which you cannot change or add to. There are very

few available for the English teacher of foreign languages. There are, however, a number available for the teacher of English as a foreign language, originally made up for mother tongue classrooms, which appear in software publishers' catalogues.

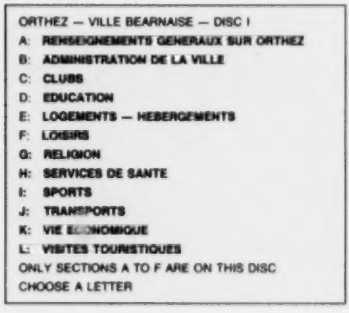
The example which follows is taken from a frame-based French database concerned with the town of Orthez in south-west France. It is called FRENCH DATABASE (3). It is a frame-based, VIEWDATA package. Pupils follow a series of menus to obtain the information that they require. Students take a series of decisions, the successful outcome of which will depend on their reading accuracy. The teacher's role is to set up and contextualise suitable enquiry tasks.

In this example, two students play the part of employees at the Syndicat d'Initiative in Ortez. They receive a telephone call requesting them to have available within half an hour certain information for a visitor who has just arrived in the town with a group of friends. They 'take the phone call' from one of their classmates playing the part of the visitor and note down his request. They have a map available to help them in their deliberations.

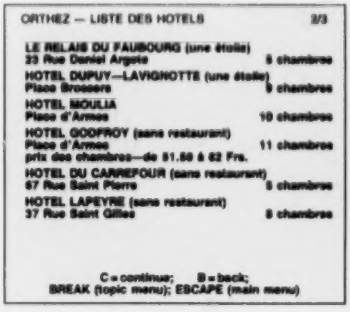
These are their notes:

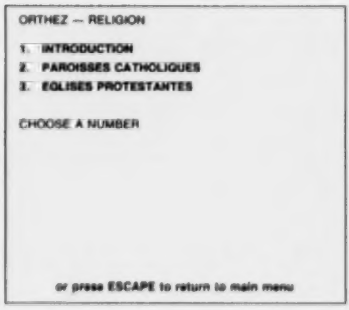
Staying at Hotel Godfroy - where nearest restaurant? Which churches and services to attend (RCs and Protestants) so that all can leave hotel at about same time?

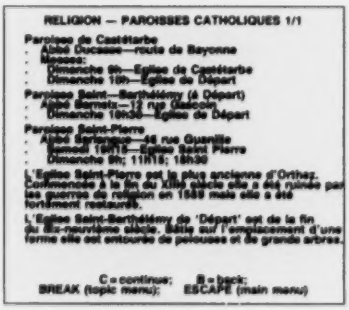
This is the route that they took through the information.

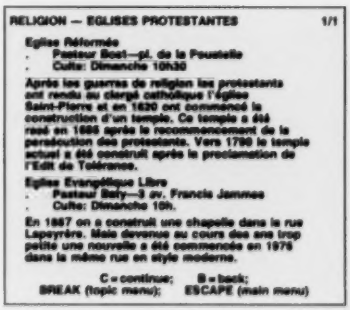


ORTHEZ — HEBERGEMENT ET RESTAURATION
1. LE CAMPING
2. LISTE DES HOTELS
3. GASTRONOMIE
4. LISTE DES RESTAURANTS
CHOOSE A NUMBER
or press ESCAPE to return to main menu

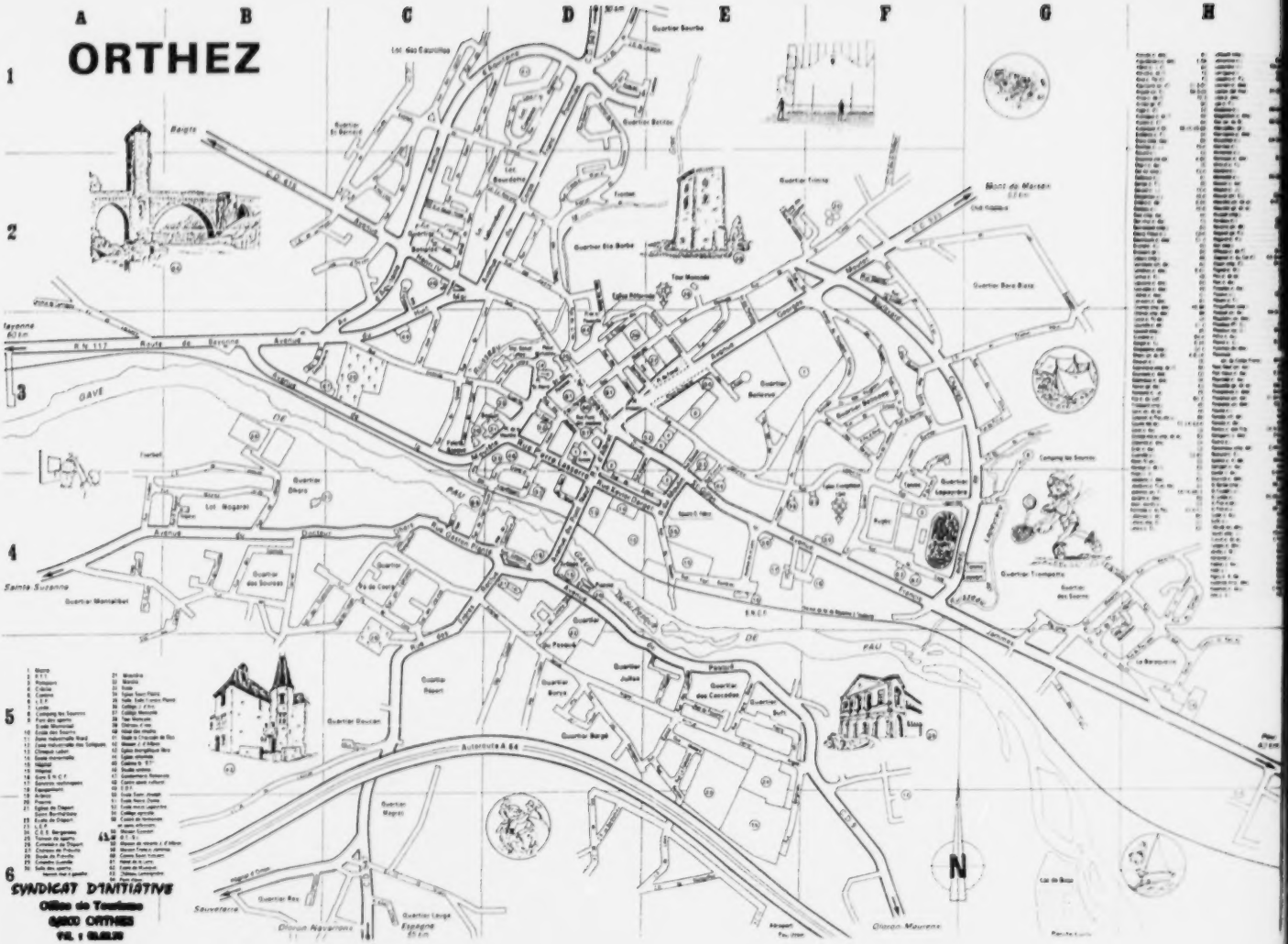

ORTHEZ — LISTE DES HOTELS 2/3
LE RELAIS DU FAUBOURG (une étoile)
33 Rue Daniel Argete 6 chambres
HOTEL DUPUY—LAVIGNOTTE (une étoile)
Place Brossere 9 chambres
HOTEL MOULIA
Place d'Armes 10 chambres
HOTEL GODFROY (sans restaurant)
Place d'Armes 11 chambres
prix des chambres—de 51.50 à 62 Frs.
HOTEL DU CARREFOUR (sans restaurant)
67 Rue Saint Pierre 5 chambres
HOTEL LAPEYRE (sans restaurant)
37 Rue Saint Gilles 8 chambres
C = continue; B = back;
BREAK (topic menu); ESCAPE (main menu)




RELIGION — PAROISSES CATHOLIQUES 1/1
Paroisse de Castétarbe
Abbé Dacasse—route de Bayonne
Messes:
Dimanche 9h—Eglise de Castétarbe
Dimanche 10h—Eglise de Départ
Paroisse Saint—Barthélémy (à Départ)
Abbé Sarrasin—12 rue Dalcoin
Dimanche 10h30—Eglise de Départ
Paroisse Saint-Pierre
Abbé Sarrasin—46 rue Guerille
Samedi 19h15—Eglise Saint Pierre
Dimanche 9h; 11h15; 18h30
L'Eglise Saint-Pierre est la plus ancienne d'Orthez. Commencée à la fin du XIIIe siècle elle a été ruinée par les guerres de religion en 1569 mais elle a été fortement restaurée.
L'Eglise Saint-Barthélémy de 'Départ' est de la fin du dix-neuvième siècle. Bâtie sur l'emplacement d'une ferme elle est entourée de pelouses et de grands arbres.
C = continue; B = back;
BREAK (topic menu); ESCAPE (main menu)


RELIGION — EGLISES PROTESTANTES 1/1
Eglise Réformée
Pasteur Best—pl. de la Poustelle
Culte: Dimanche 10h30
Après les guerres de religion les protestants ont rendu au clergé catholique l'église Saint-Pierre et en 1620 ont commencé la construction d'un temple. Ce temple a été rasé en 1685 après la recommencement de la persécution des protestants. Vers 1790 le temple actuel a été construit après la proclamation de l'Edit de Tolérance.
Eglise Evangélique Libre
Pasteur Baty—3 av. Francis Jammes
Culte: Dimanche 10h.
En 1967 on a construit une chapelle dans la rue Lapeyrère. Mais devenus au cours des ans trop petite une nouvelle a été commencée en 1975 dans la même rue en style moderne.
C = continue; B = back;
BREAK (topic menu); ESCAPE (main menu)

Ensouleido Software


ORTHEZ
A
B
C
D
E
F
G
H
1
2
3
4
5
6
SYNDICAT D'INITIATIVE
Office de Tourisme
64300 ORTHEZ
Baigts
Sainte Suzanne
Quartier Montalibet
Quartier Oloron
Quartier des Sources
Quartier Bourbe
Quartier Bastide
Quartier Trinité
Quartier Bas Barbe
Quartier Bonne Brise
Quartier Bellevue
Quartier Lapeyrère
Quartier Transports
Quartier Julian
Quartier Borya
Quartier Berge
Quartier Doucan
Quartier Magret
Quartier Rex
Quartier Longé
Espagne
Autoroute A 64
Oloron Navarrenx
Oloron Mauléon
Pau
N

On-line databases

It is not the purpose of this book to explore in detail the use of on-line databases. Currently there are very few within the UK with relevance to language learners. Access via the phone lines to databases in other countries is by no means straightforward. Such services as exist at the moment can be expensive and difficult to track down. However, there is no doubt that international on-line services are on the increase and it is an area which linguists need to watch carefully, both from the point of view of such services providing learning materials and from their becoming a topic for investigation in their own right within a vocational language course.

Key word searches on-line

If you wanted to retrieve documents concerned with the generation gap from a service such as DATA-STAR, the Swiss Press database, you would need to identify and name the key areas on which to base your search. You might begin by asking for the computer to search for those concerned with '*parents*' and '*enfants*' and '*conflit*'. When all the texts stored in the database containing these words have been located, it will then tell you how many articles it has found, offer you the choice of reading abstracts, to avoid wasting time on irrelevancies, before giving you the opportunity to download any complete texts which you feel would be of use to your students.

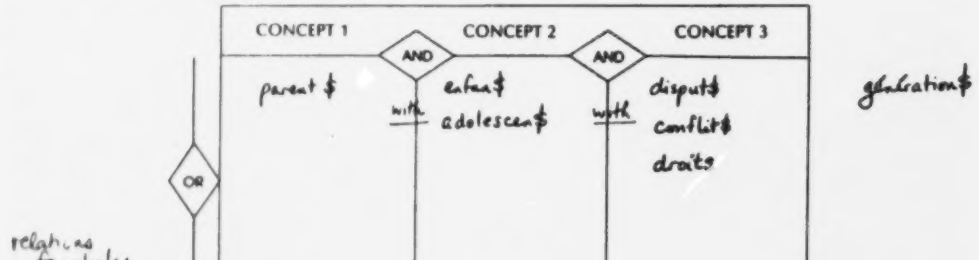
Worksheet for a keyword search of the Data-Star press database. Here concepts and their combinations are listed as a basis for the search. The $ sign at the end of the word is a 'wild card' indicating that all forms of the word, singular or plural, masculine or feminine are equally valid in the search.

Search Worksheet

DIALOG INFORMATION SERVICES, INC

① Topic *Le conflit des générations*

② Important Ideas



The on-screen search:

1 An initial search for articles which contain the word parent$ identifies 2771.

2. A similar search on the keyword 'enfan$' identifies 8651.

3. A similar search on 'adolescen$' identifies 845.

4. A search on 'enfan$' and 'adolescen$' occuring in the same sentence identifies 9227 articles.

5. A search for articles in which 'parent$' occurs in the same sentence in the articles resulting from search 4 identifies 648.

6. A search for articles containing 'disput$', 'conflit$' or 'droits' identifies 15393.

7. A search combining the keywords in 5 (parent$, enfan$ and adolescen$ with those in 6 (disput$, conflit$ and droits) identifies 13.

8. A request to the computer to print the first five articles identified.

```
1_:parent$
        RESULT      2771
2_: enfan$
        RESULT      8651
3_: adolescen$
        RESULT       845
4_: 2 or 3
        RESULT      9227
5_: 1 with 4
        RESULT       648
6_: disput$ or conflit$ or droit$
        RESULT     15393
7_: 5 with 6
        RESULT        13
8_: ..p all/1-5
```

As you will see from this example it is necessary to be very precise when setting up a search and to be prepared to refine your search to reduce the number of articles to a practical size. Keyword searching demands very accurate use of language and a knowledge of synonyms within the topic area. Such searches can provide an excellent vehicle for the development of high level vocabulary skills in older students as well as giving them practical experience of an alternative source of authentic up-to-date information.

Making good use of abstracts

Some on-line press databases like DATA-STAR make charges for articles which are downloaded. It is therefore important to be able to read abstracts intelligently to avoid undue expenditure. This demands linguistic sub-skills such as prediction which will need explicit development when students are working in a foreign language. The sub-skills are worth developing in both a linguistic and vocational context. If young people are to go on-line themselves to search for materials they will be equally valid in a financial context!

CAMPUS 2000

A subscription to the Campus Plus service of CAMPUS 2000 gives access to the modern languages database which consists of a number of constituent databases including FRANTEL, which has a TELETEL-like format, L'Informatique du Derbyshire, which adopts a task-based approach, and also a range of different text types in French and German. There is also a section containing information for teachers supplied in association with CILT.

TELETEL

DATA-STAR is an independent information provider of which there are a growing number in the UK. In France TELETEL is the umbrella organisation through which you can gain access to a vast network of information providers. The presentation is frame-based. There is much of relevance to young learners. Given a topic area such as holidays and travel and careful selection of frames, the information can be accessible to those with little knowledge of the language, coming as it does in small quantities colourfully displayed. TELETEL is used widely in France and the authenticity of the materials and the linguistic skills required to gain access to them is in no doubt.

It is possible to access services on TELETEL using software produced by ALDODA and to download single frames which can then be viewed like a carousel of slides. However, by far the most valuable and authentic use is when the student(s) interact with the system, taking decisions at option points and accepting the consequences of their decisions.

There is justifiably great interest in the use of TELETEL in education. Moves are afoot to make access easier and cheaper and to overcome copyright restrictions where material is downloaded for use in a non-profit making, educational context. This will in turn enable schools, or possibly local education authorities, to download a series of frames to a floppy disc, which, with appropriate software currently under development, can then be linked together according to their original routing pattern thus providing an off-line sub-set of the real thing, but with the essential interaction available for students.

EMUTEL (4)

EMUTEL is an example of this approach. It is a software package consisting of frames from the Limousin database on TELETEL which offers the original multiplicity of routes through the frames. Pupils can interact with the software their own pathway to seek the information that they need. Unfortunately the type of information included does not permit any activities of a transactional nature, as TELETEL itself does.

Databases for teachers

As we have seen, databases can be used as the basis for the development and practice of information skills by students in the target language. Dedicated databases are also a rich source of materials for the teacher to supplement those provided by traditional media. In the next chapter we shall look at ways in which DIY databases can be used by teachers both for the development and storage of learning materials and for administration.

CHAPTER 5

Databases: practical tools for busy teachers

In this chapter we shall concentrate more on the practical contribution that a database can make to the efficient management and creation of resources. It is not within the scope of the book as a whole to dwell on the merits of individual database management systems. They vary enormously in terms of field length, size of records, speed and memory capabilities. The database software available in most schools for BBC(B)s and Masters is barely adequate for the uses described here. More powerful systems available for Archimedes, NIMBUS, PC compatible and Apple Mac computers are more appropriate. They will repay in terms of speed the initial investment of time needed to become acquainted with their complexities. It is likely that you will be able to find a suitable package already available in any secondary or tertiary educational institution.

Teacher generated materials

Nowadays teachers generate many of the materials that they use in their lessons, either by writing them themselves, or by collecting them from authentic sources. Storage of materials other than books and tapes can be a problem, as can efficient and speedy retrieval when required. Masters get lost or damaged and carefully duplicated sets find their way into the wrong drawer of the filing cabinet, only to be recovered when least required.

The change from a grammatical progression to topic-based learning has in part been responsible for this growth in the school-based production of materials. This fact and the tendency of syllabuses for public examinations to be split up into not only topic areas, but also notions, functions and grammatical structures means that materials need to be identified by a number of different tags if they are to be retrieved efficiently.

Proliferation of materials

More widespread use of audio and video tapes and computer software alongside paper-based materials and linked to a common theme also presents the teacher with a resource management problem which it is essential to solve, particularly in a large department with a central store. It is no longer possible to rely on a single text book to provide all the teaching materials that you need, particularly given the current emphasis on authentic materials. Equally, we live in a very fast moving world where rapidly changing life styles and inflation soon make text books appear out of date to young people.

Identifying materials and their uses

A letter received from a German fifteen-year-old describing his recent holiday in north Africa, the journey each way and all that he did when he was there, and including his lengthy comments on a film that he saw on his return and his requests for information

about the English education system, is a document with many uses. It has clear links with the topics of holidays, travel, leisure activities and education. It offers examples of past tense verb forms and past tense narrative. It includes language functions involving giving information about past events, expressing opinions and requesting information. It contains numerous examples of general notions, in particular those concerned with relative time.

Whilst in no way suggesting that any or all of these aspects might be made explicit to students, a teacher might well wish to use the letter at one stage as an example of a past tense narrative, asking students to identify those elements which indicate that the events in the letter have already occurred, and at another stage to give practice in vocabulary related to one of the topics contained in the letter.

The teacher might well be aware of the existence of an audio tape involving information about English and German education systems which would tie in nicely with the questions posed in the letter. There might also be available some brochures in German about north Africa, picked up by a colleague on holiday there, and providing a useful extension to the ideas contained in the letter. Another member of the department might have caught sight of a review of the English language version of the film commented on in the letter, cut it out and brought it in to give students practice in comparing two texts about the same film.

It is no longer physically possible always to store relevant documents together without restricting their use because of the need for cross referencing. However, a database, with fields carefully established to denote the kind of use likely to be made of the materials, and their location, could greatly ease the problem.

Setting up a resources database

It is often helpful when setting up a database to begin by considering the kind of search that you will want to make when data is available. Let us imagine that we are planning a series of lessons for a class of 12-year-olds in the second year of an English comprehensive school who have studied French for one year. The underlying theme is shopping. Within that theme we want to introduce and practice a number of question forms concerned with quantity, size, colour and cost.

We will have at our disposal from time to time a computer, a video cassette player and six audio cassette recorders. We wish to vary the working groups from a full class size, to smaller groups and pairs. We would, therefore, wish to identify materials which met with the following criteria:

topic(s)	=	shopping
medium	=	paper-based
		video tape
		audio tape
		computer software
language function(s)	=	requesting information
		giving information
general notions	=	quantity
		colour
		size
		cost
grammar	=	interrogatives

skills	=	speaking listening writing reading
language level	=	year two/introduction

In order to accommodate searches relating to the above criteria, the fields could be defined as follows:

Title of resource
Location/number
Medium
Text type
Topic area(s)
Language function(s)
General notion(s)
Grammar topic(s)
Skills supported
Language level/stage

This form of database does not preclude the insertion of textbooks. They can be entered as a single item, or, if time permits, each chapter or unit can be dealt with as a separate item. This adds greatly to the flexibility of the system, but is initially costly in terms of time. A number of textbooks analyse their contents under headings similar to the field names defined above, which makes the cataloguing process less onerous.

There is no doubt that the initial cataloguing of materials, be they books, single sheets of paper, audio and video tapes or computer software, and the typing into the database of the relevant information is a formidable task. However, once accomplished, each new acquisition to departmental stock will only take a short time to add to the database and the benefits to be gained from being obliged to analyse the content of new materials, allied with the saving of time in locating materials will make the project worthwhile.

Pupil records

Databases can also be used for holding records of students' achievements and clearly have a use in keeping track of individual performances in, for example, a flourishing graded objectives scheme. UK teachers embarking on the computerisation of such records should be aware of the need under the terms of the Data Protection Act to register any databases containing information about individual students. The head of the institution or the person responsible with the institution for such matters should be informed before the database is set up.

Databases and materials creation

So far in this chapter we have considered databases essentially as administrative tools which can facilitate the classification of information about pupils or resource materials. However, there are a number of ways in which they can be used to both generate and store materials.

Selecting the software

Before making a start on the creation of a database to provide teaching materials, it might be helpful to refer back to the section in Chapter 4, page 29, which suggests certain questions that you should ask before settling on one or other database management system for your work. For some applications a very simple but limited system is perfect. For other applications you may need more space and comparatively sophisticated search facilities.

Making a start

The procedures that you will follow will be the same as those described in the previous chapter where students were the information providers. Your reasons for undertaking the work yourself will probably relate to the nature of the information to be included, the time necessary to gather and structure the data and a desire to have a bank of materials with which the students are not familiar.

With regard to the content, it is important to remember that it is usually possible to edit records once they have been created. This means that, provided that you keep carefully a master copy of your database, students can be invited to edit records as well as using printouts in a variety of ways.

Databases can be made up of any information sets which lend themselves to being broken down into a number of headings under which, in turn, details can be given meaningfully in few words. The resulting records can then be used in a variety of ways to suit learners at different stages, to support tasks in all four language skills. Databases built up around people or places are particularly suitable for foreign language learning.

Activities based on printouts

It is not always easy to find fresh materials on which to base oral information gap activities where one student tries to elicit information held by another, particularly where a specific topic area or question type is required. A database containing information about people, perhaps in the form of a *curriculum vitae* as in the example below, would provide a suitable starting point for such activities as well as the following:

expanding the record to form a written/spoken description of the person concerned;

comparing the information in two records, commenting and drawing inferences;

editing the information in a record to fit a picture of the person concerned;

editing a record to fit the changed circumstances of the person in question (e.g. after the move from university to first job).

Such a database need not have a vast number of records. Forty would be more than adequate. In the applications described above little use would be made of the search and sort facilities of the database, except to select the fields to be included in the

printout so that the attention of students was focused on particular items of information, and, therefore on particular question types.

Selecting the fields to display

Screenprint of first record in the selected fields displayed

Tasks for different ages and abilities

The merit of creating a database rather than wordprocessing the information lies in the fact that as well as being able to provide students with printouts and opportunities to edit, you can also set up the kinds of search activities described in the previous chapter.

Younger students could use the database to find answers to simple questions. Those with more experience in the target language could edit records and use limited field printouts for oral work whilst advanced learners could expand and embellish the descriptions as appropriate or use the information given as the basis of an identity which they go on to adopt in a role play. They could also be encouraged to find replies to questions which in turn require oral or written explanations and justifications.

Predicting, hypothesising and checking

Databases are used in other areas of the curriculum to develop the skills of predicting and hypothesising. Whilst as foreign language teachers we tend to see these skills as relevant to efficient reading and listening, the way in which they are used in connection with information retrieval can also serve our purpose.

Taking our '*Curriculum vitae*' database described above, we might ask students to hypothesise about where they think that those with the highest incomes might live. They are likely to suggest that the majority will live in Paris. A search might well prove them right. It might also reveal notable exceptions which will require explanation.

In engaging in such activities, students are constantly reinforcing vocabulary and are getting at the concepts behind the words. They are establishing conceptual links which will serve them well when they come to use the target language in the target country. They tackle this kind of work with a will because they are discovering something which is not already explicit. In the course of achieving their results they are involved in interesting and stimulating processes. They engage in taxing, high level

skills rather than trivial yet time-consuming low level skills which they rightly perceive as boring.

The benefits to students of interpreting data and handling information, rather than being the passive recipients cannot be stressed enough. If time permits, the benefits derived from their going through all the stages of making up a database are great. If lesson time is short, the alternative of a teacher-constructed database which can be searched, edited and added to by students is the next best thing and will be much appreciated.

CHAPTER 6

Practical considerations

Curriculum change and IT

It is said somewhat cynically that curriculum change only occurs either when that change is dictated by public examination syllabuses or when the effect of the change is to make the teacher's lot easier.

In recent years we have seen sweeping changes in the demands made upon students by public examinations, changes which have resulted in new approaches in the classroom. With the emphasis on project work in many areas of the curriculum, there is a move towards individualised learning and towards young people taking on more responsibility for their own learning, often through a process of enquiry and exploration. There is greater stress on demonstrating knowledge and understanding through action, rather than through explanation.

Information technology is in the curious position of being a proper area of study on its own account, but of also being the means by which knowledge in other subject areas can be actively demonstrated. It is also becoming the vehicle for the changes in learning style referred to above since, if well used, it stimulates a proactive and enquiring approach in the learner.

Introducing IT into a language department

The twin information skills of word and data processing have a part to play in the learning and teaching of foreign languages, firstly because they have much to contribute to the learning process, secondly because they are as valid and authentic a means of communicating and storing information as are books, handwritten documents, audio and video tapes. As such, they are essential to our purpose.

Their use in the classroom, represents, however, curriculum development which, as yet, is not dependent on an examination syllabus. Equally it would be folly to suggest that in the early stages their introduction is going to make life easier for the teacher. However, those who have fought the battle and won, agree that eventually life does become easier. Pupils are well motivated, concentration levels over extended periods of time are high. Teachers find themselves free to direct their attention where it is needed, to individuals with particular difficulties. Even teachers who have only one computer available comment favourably on its effect on students' work and attitudes, seeing the computer as of great use in a circus of group activities.

As with any teaching aid, you have to sort out the practicalities before you can use computers successfully for word and data processing in the language department. Questions have to be asked and satisfactory answers found.

Hardware considerations

Ideally you need one or more standalone computers* in your classroom, or computers

on your institution's network* system. You also need access to a computer room on a regular basis.

Hardware compatibility within Europe

Schools across Europe, with the exception of the United Kingdom, mostly use machines which have the same operating system*, MSDos*. A piece of software which runs in a school in Denmark is likely to run without difficulty in a school in Italy, although there may be keyboard differences. This fact has major implications for the acquisition of authentic foreign language software for UK schools, given that it is often possible to reconfigure* keyboards for use with software from a country for which your computer was not designed but whose language you teach. It also opens up interesting possibilities for EFL learners to exchange word and data processing files across national barriers.

The new generation of micros coming into UK schools offer near or complete compatibility with MSDos, or, as in the case of Apple Macs, access to an international range of software of the word and data processing type.

Hardware specifically for foreign languages?

In view of the desirability of acquiring authentic software and of exchanging files with schools abroad, you might well feel justified in making out a case for a language department computer room with hardware that is truly compatible with that used in the countries whose languages you teach. If you follow this path, try to ensure that provision is also made for audio cassette players next to the computers and that there will be space for an interactive video workstation* when this technology becomes more readily available to schools.

As linguists we have to keep reminding ourselves that we are teaching a practical subject with a high vocational content. We need the appropriate tools to do a good job. The sums of money involved sound outrageously high because of our limited demands in the past. They would be unlikely to shock our Science and Design and Technology colleagues who are already making requests for computers with capabilities directly related to their specific subject demands!

What to look for in a wordprocessing package

When making enquiries about a wordprocessing package in a language using a roman script, you should ask the following questions of the supplier:

- Can foreign characters be typed in without having to type in the ASCII* code number?
- Will the foreign characters appear correctly on the screen?
- Will the foreign characters appear correctly on printouts using the school's existing printer without having to get inside the printer to change the dip switches* every time the software is used?

- If the answer to 3 is 'no', would the purchase of another printer solve the problem? If so, which printer?

- Does the package offer full or limited wordprocessing facilities? Delete, Insert, Search, Search and Replace and Block movement are minimum requirements.

For languages using non-roman scripts there are, naturally, specific questions relating to specific languages. There is a growing number of packages for a wide range of Asian languages, including Arabic and Chinese. A list is available from CILT.

Getting the right version to match your hardware

There are no easy ways to preview software. However, the person responsible for computers in your establishment will help you to ask the right questions of suppliers regarding compatibility with the systems available to you.

Network software

Where a computer network is in use, particularly if standalone facilities are not readily available at workstations, it is vital to discuss potential purchases with the network manager before parting with any money. Not all software will run on networks, particularly BBC networks. Also, some companies have a different pricing structure for networks which reflects the fact that one piece of software will be capable of use on many computers at the same time.

You are more likely to find network versions of wordprocessing packages than of database packages. Again, this is particularly true of BBC networks. There are reliable examples of both types of packages for PC compatible and Apple Mac networks.

General availability of wordprocessing software

Readers concerned with the EFL, ESL AND ESP are almost spoilt for choice in this respect. Their difficulties lie in selecting the package most appropriate to their needs. Those concerned with other roman script languages who use PC-compatible MSDos computers have access to a wide range of packages which support accents. Some of these are designed for use by linguists and language students and accents are obtained with the minimum number of keystrokes, as for example in VUWRITER (1).

Others are standard packages with on-screen instructions in English, but capable of producing accents in documents. MS WORD (2) is a popular example. However, accent production in them is not straightforward and can be offputting for young learners. It is not simply a matter of one or two keystrokes, but of holding down the ALT key and typing in the following numeric ASCII codes to achieve the required letter or symbol:

é 130	ä 132	á 160	ß 134
è 138	ö 148	é 130	Ã 143
à 133	ü 129	ſ 161	ö 148
ù 151	Ä 142	ó 162	Ð 153
ç 135	Ö 153	ú 163	ü 129
â 131	Ü 154	ñ 164	Ü 154
ê 136	β 225	Ñ 165	à 133
î 140		¿ 168	è 138
ô 147		¡ 173	ì 141
û 150		Pt. 158	ò 149
ë 137	½ 171		ù 151
Ç 128	£ 156		È

For teachers of languages other than English which use a roman script who work with NIMBUS PCs, BBC (B)s or BBC Masters, there is a limited number of packages offering trouble-free accents. For an up-to-date list, please contact CILT.

General availability of database software

As with wordprocessing software, those concerned with English will need to spend time weighing up exactly what they want from the very wide range of packages available. They also can choose from the increasing number of low-cost integrated packages which include a wordprocessor, database and spreadsheet in which it is possible to exchange data between different applications.

Integrated packages and straightforward database management systems designed for use with PCs can support accents in the same way as the wordprocessing packages referred to above. However, the majority will encounter difficulties when trying to sort data alphabetically where accented characters are concerned. They will tend to sort them according to their ASCII code number. The numbers of accented characters are beyond the range of unaccented characters. An accented initial A would, for example, come after Z in the ASCII code.

Exchanging database files with institutions in another country

It is to be hoped that in the future it will be possible to exchange database files with foreign schools where both schools have the same or a compatible database management system, thus combining data collection and retrieval skills in a meaningful way. Hopefully, this might involve departments other than the language department in the process. This is already possible with a number of commercial word and data processing packages.

Database management systems and non-roman script languages

Both database management systems and dedicated databases are difficult to find, but as organisations representing the various minority language groups in the UK increase their use of computers, it is likely that more will become available.

The speed of change

There is growing evidence that the hardware compatible with that found on desktops in commerce and industry is finding its way into schools throughout the world. This gives language teachers and their students access to a far wider range of software than the education market alone could ever sustain. Software for this market is reviewed weekly in computer magazines dealing with PCs and Apple Macs and it pays to keep an eye open for interesting products from the quantity of new packages which appear daily.

It also pays to look at reviews in magazines such as Electric Word (3) which incorporates Language Technology, to see what uses professional linguists are making of computers. Databases designed specifically to build up term banks and personalised glossaries might well be seen as translators' tools at the moment, but could prove attractive to schools in the medium term.

Disc management

Once you have got your software, you need to consider carefully how you are going to use it. When you have thought this through you are ready to make up the necessary backup* and work* discs. It is important to do this in advance of using the program with a class to ensure that master copies are preserved and that work can be saved quickly and efficiently without risk of loss.

Like any filing system, computer discs and the files that will be stored on them need structure and management. Let us imagine that we are going to use a standard wordprocessing package with a class of thirty thirteen-year-old students over the course of a school year. They will work in groups of three or four in the computer room where ten machines are available. The machines are not networked. They are standalone machines, each with a single disc drive. Only two machines have printers attached. Were we to be working with one standalone computer, the procedures for making up the working discs would be exactly the same.

We anticipate that in the course of the year the class will create about 12 finished files. In other words, they will complete twelve pieces of wordprocessed written work. In the course of their writing, they might create supplementary files which they should delete when no longer required. In order to achieve what we have decided in the preceding paragraph, we shall have to do the following before the first lesson:

- Format* 17 discs for the machines to be used by the students.
- Make a work disc copy of the wordprocessing software and put away the master.
- Make 15 copies of this work disc - 10 for immediate use and 5 standbys.
- Write out an individual and identifiable label for each of the 10 discs required for immediate use, BEFORE sticking the label on to the disc, so that each group will quickly recognise their own disc.
- Label the remaining 5. If you need to make use of one of these standby discs, write the group name on very carefully with a special pen for writing on discs, or with a soft felt tip. If you press on hard with something like a biro, you might well find that the disc is damaged.

File management

If your students are not accustomed to saving wordprocessed files, make certain that they understand the following basics:

- File names on BBC computers can contain no more than 7 characters.
- File names should be meaningful.
- If a number of files on the same topic are likely to be produced, then it is helpful to think of a covering name of 4 or 5 letters which, in the full file name will then be followed by a number, e.g. TEMPS1, TEMPS2, TEMPS3 etc.

- If you save a file with the same name as an existing file on your disc, the existing file can be 'overwritten' without warning using some packages. That is, the existing text will be wiped off and the new text stored in its place. This may be what was intended by the student. It may not!

- Space on discs is limited. Students need to know the limitations of the discs that they are using, both in terms of actual space, and the possible number of file names that the disc catalogue can hold.

- When files become redundant, they should be deleted using the appropriate command.

- When working on a long file, it is important to save your work frequently, using the same file name each time. If you do this, you are unlikely to lose a great deal if a power cut suddenly shuts down your machine.

Practicalities in the classroom

You will find that the majority of students aged eleven and over are quite capable of coping with their own disc management given clear guidelines. What they are less good at is managing their time.

In the scenario above only two printers are available for up to ten groups of students. They will all want a printout of their work, and indeed it is desirable that both they and you should have one as a record of the work done during the lesson.

A good ten minutes before the end of the lesson you should ask those groups with a printer attached to their computer to save their work and to make two printouts or hard copies, one for you and one for the group's folder. They should then take their disc out of the disc drive* and put it into its sleeve before returning it to the box. Shortly after you should ask neighbouring groups to save their work, go to a machine with a printer attached, load in their file and make the necessary printouts so that everyone is ready by the time the bell goes. All discs should be returned to the disc box to avoid damage and corruption.

In an ideal world where all schools have a computer technician, the discs should be backed up each time after use.

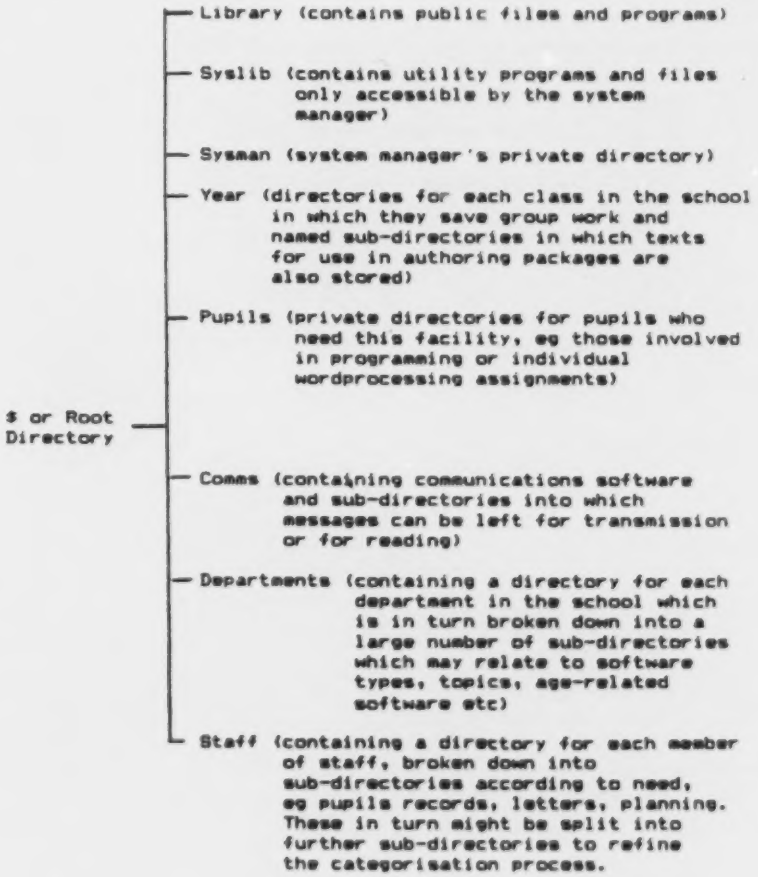
Pupils will very soon get used to the saving and printing routine, only needing reminding about the imminent end of the lesson.

In a situation where only one computer is being used, it is essential to match the task to the amount of time you intend to allow each group at the computer. With younger learners a list of 'turns' at the keyboard is helpful and prevents time being wasted as students keep one eye on the computer and the other on the teacher in order to make sure that they get the next turn.

Using networks

Some schools have networks of computers where programs are stored centrally on a file server and where each workstation has access to the network printer. If your school has such a system, you should discuss your needs with the network manager, asking in particular if you can have a section of the hard disc* for the exclusive use of the languages department which can be broken down in a way which suits the teaching

structure of the department and the uses that you might wish to make of the facilities. A single directory* is of little use when a number of members of staff might wish to bring in classes to wordprocess. If all the work produced by a number of classes were to be stored in the same directory, the opportunites for files to be overwritten or changed by those who had not originated them would be legion. If a single class had their own directory, each group would need to identify their own fields clearly, perhaps making the first letter of each file name the same, e.g. Atemps1, Atemps2, Atemps3 etc.


$ or Root Directory
Library (contains public files and programs)
Syslib (contains utility programs and files only accessible by the system manager)
Sysman (system manager's private directory)
Year (directories for each class in the school in which they save group work and named sub-directories in which texts for use in authoring packages are also stored)
Pupils (private directories for pupils who need this facility, eg those involved in programming or individual wordprocessing assignments)
Comms (containing communications software and sub-directories into which messages can be left for transmission or for reading)
Departments (containing a directory for each department in the school which is in turn broken down into a large number of sub-directories which may relate to software types, topics, age-related software etc)
Staff (containing a directory for each member of staff, broken down into sub-directories according to need, eg pupils records, letters, planning. These in turn might be split into further sub-directories to refine the categorisation process.

Databases in class

The scenario above relates directly to wordprocessing. However, the suggested routine to be followed applies equally to DIY databases where groups within a class are responsible for creating their own database. In the case of a single class database or group databases, it is important to retain a master copy*, not only of the empty

system, but of each individual database. It is also essential to make a backup after each session where additions or changes have been made. It is one thing to have to retype a page of text when you have a printout available, if a disc becomes corrupted. It is quite another to reconstitute a database of perhaps 100 records with nothing to go on except hazy memories!

Rewards for planning and perseverance

As in any other teaching process, it pays to have a clear set of objectives and to be well prepared when using computers. You will also need a measure of perseverance to get going. However, it is true to say that as students become more skilled in using computers and gain increased understanding of the nature of the tasks that you set for them, they will begin to shoulder some of your load, taking on greater responsibility for their individual or group efforts, seeing you as a reference point, a facilitator and manager of learning rather than as constant pacemaker and source of all wisdom. It is at this point that teaching and learning become a partnership, to the mutual benefit and greater enjoyment of both teacher and student.

GLOSSARY

ALT key	The ALT or Alternative key, if pressed with other keys gives access to special characters or special computer codes. For example, on an Apple Mac computer, pressing the ALT key and the letter 'i' gives a circumflex accent.
Apple Mac	This is the current range of Apple computers desk top machines. They are considered to be very easy to use because it is not necessary to learn a series of commands. These have been replaced by icons representing the functions and software from which the user may choose simply by positioning the cursor and clicking on the hand-held mouse.
ASCII code	This is the acronym for the American Standard Code for Information Interchange. It is the code used by computers to represent characters. For example, the ASCII code for 'K' is 75. If you hold down the ALT key and type in 75 on the number pad, a 'K' will appear on the screen.
authoring software	Authoring languages allow the user to develop software, often of the tutorial type, without having to learn a high level programming language. Authoring programs offer the user a ready-made structure, such as a multiple choice test, into which he can type his own questions and alternative answers. There are a number of such packages available covering the majority of popular language exercises.
backup disc	When you buy a disc you should, if you are able, make an immediate copy. This process is called 'making a backup'. You should then put away your original, treating this as your master copy, never to be used except to make further backups as necessary and as permitted by the arrangement under which you bought the software. Some companies do not allow you to make backup copies of their discs.
BLOCK functions	These are the functions within a wordprocessor which allow the user to mark up blocks of text which can then be copied to another part of the document, moved to another part of the document, saved to disc or deleted. Not every wordprocessor has all of the functions just described.
CD ROM	This is a compact disc capable of storing sound, still pictures and computer software.
character code	See ASCII code above.
computer-based dictionary	This is a dictionary resident either in the computer's memory, on a floppy disc or hard disc which the user can consult whilst working within another application such as a wordprocessor. Both monolingual and bilingual dictionaries are available in this

	form for PC compatible and Apple Mac computers. A hard disc is usually required.
computer-based thesaurus	These thesauruses operate in the same way as the computer-based dictionaries above.
DELETE	This function allows the user to erase unwanted words and characters from his text. This is usually achieved by positioning the cursor to the right of where the characters are that have to be removed, and then pressing the DELETE key.
desktop publishing (DTP)	This represents one step beyond the wordprocessor. Its characteristics are the ability to incorporate graphics into text and the range of different styles and sizes of type available. Simple but effective systems are available for use in the primary school whilst the most sophisticated systems offer a bewildering array of features to the professionals.
dip switches	These are tiny switches located within a printer which control how the printer goes about its work and what it prints. You should consult your printer manual before making any changes.
directory	It is essential to structure the store of programs and files held on a hard disc. This is done by means of a hierarchy of directories beginning with what is called the root directory. Directories can be compared with divisions in a library which contain books of a certain kind. Floppy discs can be structured in the same way. Some programs need to place files in different directories to take account of the different types of data stored in the files.
disc	Usually refers to a so-called 'floppy' disc on which computer programs and data are stored. Some computers use 5 1/4" discs and others the more robust 3 1/2" discs. See also 'hard disc'.
disc drive	This is a device which enables the computer to read data from the floppy disc and to save data back to the disc.
download	When you have logged on to a remote database, you might decide to save an article on a floppy disc in the disc drive attached to your computer. In order to do this, the data passes into your computer's memory before being saved to the floppy disc. This process is called 'downloading'.
editing	In computer jargon 'editing' refers both to the correction of existing text and to the creation of new text. In some wordprocessors it is necessary to go into 'EDIT' mode before you can begin typing.
electronic mail	Mail which is sent from one computer to another using a modem and the phone lines. In the major public systems messages are exchanged by way of a mainframe computer.
ENTER key	This key can be used like the carriage return key on a

	typewriter to move to a new paragraph. However, it should never be used as such simply to move to a new line whilst wordprocessing. There is automatic wordwrap to take care of that. The ENTER key is also used to confirm input in a computer program. For example, if you are asked to type in field names when setting up a database, you will have to press the ENTER key to confirm your decisions.
field	See 'field name' below.
field name	The name given to each field in a database. The fields are the categories of data within a record, e.g. NAME, ADDRESS. They can be compared to the headings used in a card index system.
file	The document created on a wordprocessor when stored on disc. This is sometimes called a text file. Also, the collection of data built up using a database management system and subsequently stored on disc. This is sometimes called a data file.
file server	A computer or dedicated unit within a network which allows users to access software and files from a central storage device such as a hard disc.
footnote (or footer)	A note, page number or title inserted in the bottom margin of a page below the main body of the text. These can be inserted automatically by some wordprocessors.
format (discs)	When you buy discs they are blank or 'unformatted'. In order to use them you have to format them, that is, you have to go through a process which creates a framework of information on the disc which allows the computer to keep track of where information is stored. Different models of computer use different disc formats.
formatted (text)	Newspapers provide an everyday example of 'formatted' text. The text is formatted to be justified at both the right and left margins. That is, there are straight edges at both the left and right sides of the text. When you format a text whilst wordprocessing, you cause the text to fall back in-between the margins that you have set.
frame-based	The presentation of information one-screenful at a time.
function key	Most computers have a set of keys which are numbered F0 to F9. These keys can be programmed to perform given functions within individual pieces of software. F0 might be the formatting key in a wordprocessor, but produce an accented character in an authoring package.
grammar checker	See spelling checker.
hard disc	A storage device not unlike a floppy disc in the way that it functions, but not removable and capable of holding huge amounts of data.

header	The title, page number or other note which appears in the top margin above the main body of the text.
indexing	Some wordprocessors automatically build up an index of words which the user flags, putting them into alphabetical order and giving the page reference as the list is built up.
input	The data fed into a computer by the user, usually by means of the keyboard.
INSERT	When wordprocessing, it is possible to insert words in the text by simply positioning the cursor to the right of where you wish the new letter or word to appear and then simply typing them in. A small minority of wordprocessors are in 'overwrite' mode when you begin to work with them. That is, they allow you to type over what you have previously written. This is not as helpful as inserting, since it is very easy to forget what you had previously written. Insert mode is easier to handle.
interactive video workstation	A workstation containing a computer linked with a monitor and an interactive video disc player. The video element will probably be provided by a CD ROM player in the future.
laser printer	A type of printer frequently found in desktop publishing systems which produces an image of a similar quality to that of a photocopier, including both text and graphics.
load	Computer programs and data are stored on floppy discs. In order to copy them into the computer's memory it is necessary to load them. This is often done automatically, by using SHIFT+BREAK on the BBC, by typing in the name of the program followed by the ENTER key on a PC and by selecting the relevant icon on an Apple Mac.
mainframe computer	A computer which is larger than a micro or a mini computer, and which can have a large number of terminals connected to it.
master copy	See 'backup' above.
modem	A device which links a computer with the telephone line to allow data to be exchanged between remote computers.
MSDos	MSDos is an operating system produced by the Micro Soft corporation. PC compatible computers use various versions of the system.
network	A network is essentially a group of micros linked together to enable them to share storage devices such as hard discs, and printers. Where these groups are on a single site, although dispersed in different buildings, this is called a 'local area network' or LAN. Networks reliant on connection via the phone lines also exist.

operating system	The software or firmware which allows the computer to accept and interpret commands.
output device	A printer is an output device. Any device linked to the computer which presents the outcome of its processing is called an output device. A monitor would fall into this category, as would a disc drive.
PC compatible computer	Computers which have a version of MSDos (see MSDos above) so similar to that of the IBM PC that they can successfully run software written for the IBM PC. The majority of manufacturers providing microcomputers for commerce and industry have standardised on MSDos, with the exception of Apple.
peripheral	A device which is plugged into a computer to offer additional facilities. A printer is the most frequently used peripheral.
printout	The product of the printer, sometimes called 'hardcopy', as opposed to data that is printed on the computer screen.
reconfigure (keyboard)	When you buy a computer it prints on the screen and on paper the characters which you see on the keyboard. It is possible to change the characters which are printed by running a short program which redefines the characters produced by keypresses. When this has been done, the keyboard is said to have been reconfigured.
record	A database consists of a number of records, just as a card index system consists of a number of cards. It is broken down into fields, just as a card is divided up into a number of headings.
RETURN key	See ENTER.
save	To store data or a computer program on a floppy disc.
search	This is a dataprocessing term to describe the process of extracting from a database specific items of information.
SEARCH/REPLACE	The facility offered by wordprocessors to search a text for every occurrence of a given word, and, if required, to replace the word by another.
sort	This is a dataprocessing term to describe the way in which the computer can manipulate data. Records in a database of names, dates of birth and addresses can, for example, be sorted on the surname and placed in alphabetical order, or sorted numerically on the date of birth and placed in descending or ascending order of age.
spelling checker	Some wordprocessing packages have the capability to check the spelling within a document against a dictionary stored in the computer's memory. They do not, however, trap typing errors such as 'bin' for 'bun' and, in the case of English, are sometimes based on American English. Grammar and style

	checkers work in a similar way, allowing the wordprocessed text to be checked against a predetermined view of correct grammar and style.
standalone computer	A computer which does not form part of any network.
style checker	See spelling checker.
teletext	This word has two meanings. It is used to describe TV information systems such as ORACLE and CEEFAX which can only be obtained on TELETEXT TVs. It is also used to refer to a style of print used on computer screens which does not offer accented or special characters in the English version. The lack of accents in this mode, which uses up very little of the computer's memory, has resulted in successful programs in mother tongue English being incapable of translation into French, for example, for use in the secondary sector.
text file	Computer data used in conjunction with a program such as a wordprocessor. Such files are also called data files, although properly speaking, text files relate to wordprocessors and data files to database management systems or other software which needs data to fill the structure provided by the program.
videotex	This term refers to information systems such as PRESTEL. These systems use teletext characters, but, unlike the teletext information services, they allow the user to interact with the system. It is through such services that home banking will be delivered.
work(ing) disc	These are discs made up for students to work with. They might contain the program to be used and a text file appropriate to their level and age group.

Chapter Notes

CHAPTER 1

(1) **PRESTEL**
British Telecom videotex service accessed by means of a computer, modem and telephone line. Its education section has now combined with TTNS (The Times Network System) to form CAMPUS 2000. PRESTEL itself is a valuable source of authentic materials for EFL/ESL teachers. Further information can be obtained from the PRESTEL enquiry office on 01-822 1122.

(2) **DATA-STAR**
DATA-STAR UK, Plaza Suite, 114 Jermyn Street, London SW1Y 6HJ. Tel: 01-930 5503.

(3) **CEEFAX**
BBC Television's teletext service, available on those TV sets designed to receive the service. Frames can be downloaded using a teletext adapter and a computer.

(4) **ORACLE**
Independent Television's teletext service which, like CEEFAX above, can only be received on sets designed to do so.

(5) **CAMPUS 2000**
The Education Network resulting from the amalgamation of PRESTEL Education and TTNS, accessed via a computer, modem and telephone line. The relevant communications software is available for BBC, NIMBUS and PC compatible computers. Further information can be obtained from: TTNS, PO Box 7, Grays Inn Road, London WC1X 8EZ. Tel: 01-782 7615.

(6) **TELETEL**
The French videotex system, accessed via the phone lines, using software such as the Aldoda package (see below) which allows your computer to emulate the functions of a 'minitel'.

A 'minitel' is the terminal which was provided free to thousands of French households to stimulate interest in the TELETEL system and to enable them to search the 'directory enquiries' database rather than taking up operator's time requesting telephone numbers of people that they wish to call.

(7) Aldoda TELETEL communications software for BBC, NIMBUS and PC compatible computers, to access TELETEL. Further information can be obtained from: Aldoda International Ltd., 27 Elizabeth Mews, London NW3 4UH. Tel: 01-586 5686.

(8) **NERIS**
The National Education Resources Information Service which is accessed via a computer, modem and telephone line. Access can be obtained direct or through CAMPUS 2000. The necessary communications software is available for BBC, NIMBUS and PC compatible computers. A CD ROM version also available. Further details can be obtained from: The Information Officer, NERIS, c/o Maryland College, Læighton Street, Woburn, MK17 9JD.

(9) **ECCTIS**
The Educational Counselling and Credit Transfer Information Service. ECCTIS is a database containing information about courses leading to qualifications at universities, polytechnics, Scottish central institutions and colleges of further and higher education. At the beginning of 1988 the ECCTIS records covered almost 50,000 courses.

CHAPTER 2

(1) **GAPMASTER**
Obtainable from WIDA Software, 2 Nicholas Gardens, London W5 5HY. (BBC and PC compatible)

(2) **GAPKIT**
Available from CAMSOFT, Wheatfield Close, Maidenhead, Berks SL6 3PS. Tel: 0628 82 5206. (BBC and PC compatible)

CHAPTER 3

(1) **VIEW**
Installed in the BBC Master range on delivery. Available in ROM form for BBC(B)s from Acorn computer suppliers nationwide. This wordprocessor is not readily available for the Archimedes computer.

(2) **VIEW >> MAC**
A program to allow the transfer of VIEW files to MacWrite and obtainable from Human Computer Interface Ltd., 25 City Road, Cambridge CB1 1DP.

(3) **DIALCOM network**
The following are members of the DIALCOM international network:

Country	Name of System	System Number
Australia	Minerva	07, 08
Canada	Infotex	20, 21, 91, 92
Denmark	Databoks	71
Germany	Telebox	15, 16
Hong Kong	Dialcom	88, 89
Eire	Eirmail	74
Israel	Goldnet	05
Japan	-	57
Korea	Dialcom	52
Netherlands	Memocom	81
New Zealand	Mailnet	07, 08
Puerto Rico	Dialcom	25
Singapore	Telebox	10, 11
UK	Telecom Gold	01, 72-87
USA	Dialcom	38, 41-50, 52, 57, 58, 60-64, 94, 95, 97-99

CHAPTER 4

(1) **KEY database management system**
ITV Association, 6 Paul Street, London EC2A 4JH.

(2) **FIND database management system**
Available from RESOURCE, Exeter Road, Off Coventry Grove, Doncaster DN2 4PY. (BBC(B) and Master computers). The Modern Language version, ML FIND is available from NCET, Sir William Lyons Road, Science Park, University of Warwick, Coventry CV4 7EZ.

(3) **FRENCH DATABASE**
Obtainable from L'Ensouleiado, Old Brackenlands, Wigton, Cumbria CA7 9LA. Available for BBC(B), Master and Archimedes, and NIMBUS.

(4) **EMUTEL**
Obtainable from Harrogate College of Arts and Technology, Hornbeam Park, Hookstone Road, Harrogate, North Yorkshire HG2 8QT. (BBC(B) and Master).

CHAPTER 6

(1) **VUWRITER**
Vuman Computer Systems Ltd., Enterprise House, Manchester Science Park, Lloyd Street North, Manchester M15 4EN.

(2) **MS WORD**
One of the most popular wordprocessing packages for PCs and for Apple Macs. It is widely available from PC and Apple Mac suppliers.

(3) **Electric Word**
PO BOX 7048610O7 KL, Amsterdam, The Netherlands.

ISBN 0 948003 23 5

The book examines the role of word and data processing not only as tools for students as writers and information handlers, but also as tools for the teacher to use in setting up activities with specific language learning objectives. It is intended to help teachers to enhance and extend everyday classroom activities through essential information technology skills.

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